15 CENTS A COPY

THE OIL WEEKLY

Devoted Exclusively To The Production and Transportation of Oil and Gas

Engineering News Statistics

HOLD THAT LINE

IN the shadow of their own goal posts, with confident opponents keyed to the pitch of determination to make those few more yards... that's when the line, the never touted, seldom praised line is appreciated. Essential... yet those seven men are scarcely noticed until danger is present.

It's the same way with a tubing catcher. Thousands of feet below the surface... out of sight, out of mind... until something goes wrong. Then.... WILL IT CATCH AND WILL IT HOLD?

Producers protected by BJ Surestop Tubing Catchers have a sense of security... gained from experience with these tools. They know that in a 2-inch drop their tubing will be caught and held. Bulletin No. 117 will tell you of the many other advantages.

BJ SURESTOP
TUBING CATCHER

BYRON JACKSON CO.
Established 1872
General Offices: 2150 East Slauson Avenue, Los Angeles, California
Mid-Continent Office: 215 East Archer Street, Tulsa, Oklahoma
Export Office: 1245 Graybar Bldg., New York, N.Y.

December 5, 1930

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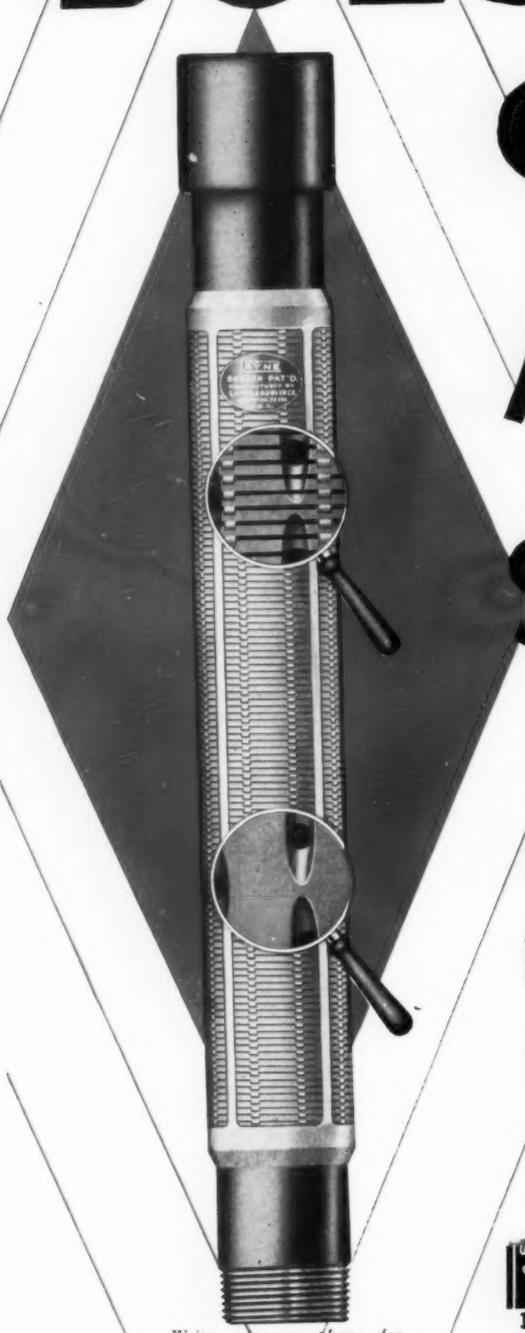
DOES NOT CLOG with MUD and SAND



Write, wire or phone for quick service catalog or further information.

THE LAYNE

MILLED GROOVE SCREEN

Grooves in the "greater production" *Layne Milled Groove Screen* are so spaced that the drainage distance between the Keystone Wires is very short, eliminating the possibility of openings becoming clogged with mud or sand.

The *Layne Milled Groove Screen* has the remarkable ability to safely stand 8,000 feet of drill pipe, it prevents sand cutting, is a tonic to low pressure wells, and increases production from 33-1/3 % to 100%.

Large and important companies abroad and in this country will testify to *Layne Milled Groove Screen's* sensational, remarkable, outstanding superiority.

Install the "greater production" *Layne Milled Groove Screen* instead of wishing you had.

The Layne & Bowler Co.

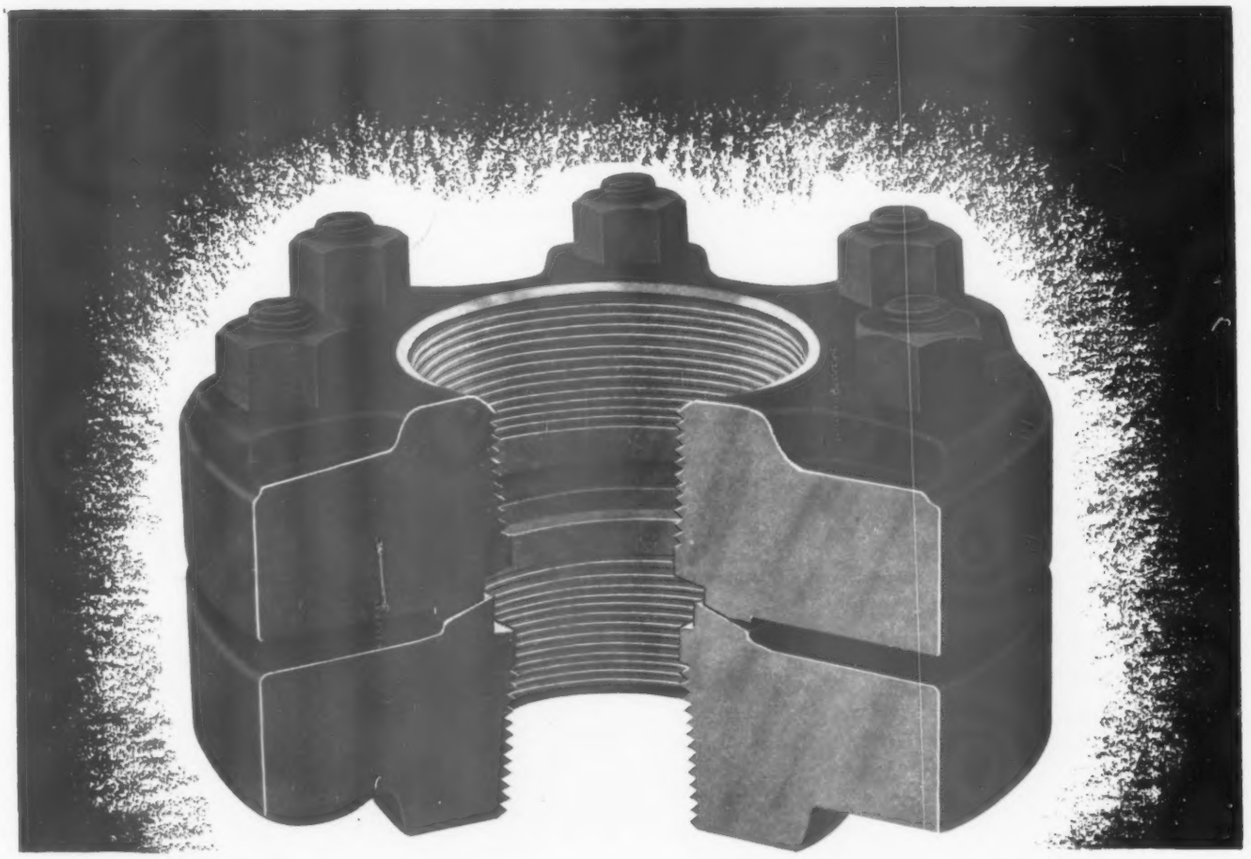
Houston LAYNE **Texas**

Install Milled Groove Instead of Wishing You Had

The Layne New York Co., 30 Church St., New York
The Layne & Bowler Corp., Los Angeles, Calif.
Vickers, Limited, London, England

A QUARTER CENTURY OF EXPERIENCE AND DEVELOPMENT

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per ye[ar]; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1[879]

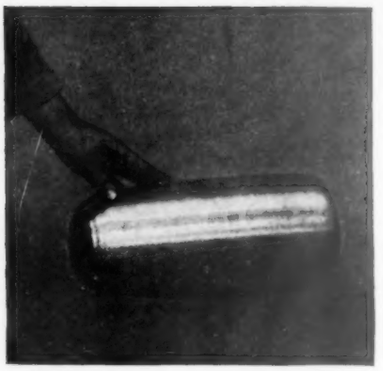


A NEW Gaso Certified Malleable Ground Joint Flange Union

» » » » Extremely high pressure with light weight 2000-lb. hydraulic test » » » » Certified malleable iron » » » » Metal-to-metal face with a ground ball joint which permits tight joint without pipes being in perfect alignment » » » » Pipe sizes 2″ to 8″

GASO PUMP & BURNER MFG. CO.—Tulsa, Okla.
Dallas, Texas New York, N. Y.

GASO PUMPS
for every oil industry need



The picture above shows one of the highly finished and extra long reeler plugs which J & L employs to obtain unusual smoothness of inside surface in J & L Seamless casing.

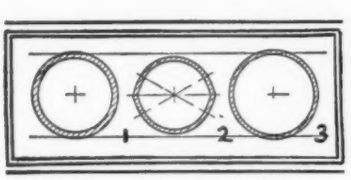
J & L Seamless

Gets its *Extra Smooth* Inside Surface in the

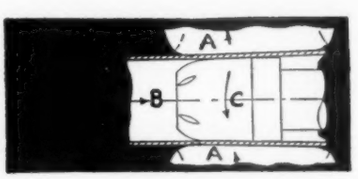
World's Largest Reelers

One of the most important processes in the production of highest quality Seamless Pipe is that which takes place in the reeler. By employing the largest and most powerful reelers in the world today, J & L is able to produce Seamless Casing, Tubing and Drill Pipe unsurpassed for smoothness of inside surface and in density of steel structure. The huge size of these reelers permits J & L to successfully employ extra long reeler plugs. In this way the inside surface of J & L Seamless is subjected to extra long contact with the reeler plug which imparts a smooth, even inside finish.

The picture above is a general view of one of the powerful J & L reelers, the largest in the world. Pipe is shown emerging from reeler.



Development of cross-section in manufacture of J & L Seamless: 1. after second piercing; 2. after plug mill; 3. after reeler.



Sketch showing reeler operation. "A" are the rolls, "B" is the pipe, and "C" is the highly finished reeler plug, which gives J & L Seamless its extra smooth inside surface.

J&L PIPE

JONES & LAUGHLIN STEEL CORPORATION

AMERICAN IRON AND STEEL WORKS

J&L STEEL

Manufacturers of Seamless and Welded Casing, Tubing, Drill Pipe and Line Pipe, and Welded Steam, Gas and Water Pipe in both Black and Galvanized.

Also makers of Bars, Shapes and Plates, Reinforcing Bars, Cold Finished Steel, Junior Beams, Steel Piling, Fabricated Structural Work, Steel Barges, Wire Products and Tin Mill Products.

JONES & LAUGHLIN BUILDING, PITTSBURGH, PENNSYLVANIA

Don't Compromise with Quality—Use Landis

There can be no compromise with Quality when Quality is interpreted in terms of clean cut, well formed threads. Such threads are indicated by the A.P.I. Specifications for the protection of the Oil Industry, and such threads are produced by the Landis Pipe Threading and Cutting Machine. There is ample proof of this in the dominating number of Landis Machines used in every Oil Field.

Principles distinctive to Landis, the variable rake angle and the shearing action of the Landis chaser, insure this quality of thread. The Landis chaser produces a full length of tapered thread regardless of the number of times it has been reground.

Above is shown a field shop in Oklahoma. There is no compromise here. They are producing threads rapidly and economically—but they do not compromise with Quality—They use Landis

WRITE US TODAY.

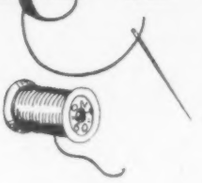
LANDIS MACHINE CO., Inc., Waynesboro, Pa.

Detroit Office: **5928 Second Blvd.**

Cleveland Office: **504-505 Marshall Bldg.**

Represented in the Domestic Oil Fields by: Colcord Wright Machinery & Supply Co., St. Louis, Mo.; D. S. Mair Machinery Co., Houston, Texas; Woodward, Wight & Co., New Orleans, La.; Herberts Machinery & Supply Co., Los Angeles; Herberts Moore Machinery Co., San Francisco, California; Hendrie & Bolthoff Mfg. & Supply Co., Denver, Colorado.

ACCURATE THREADING

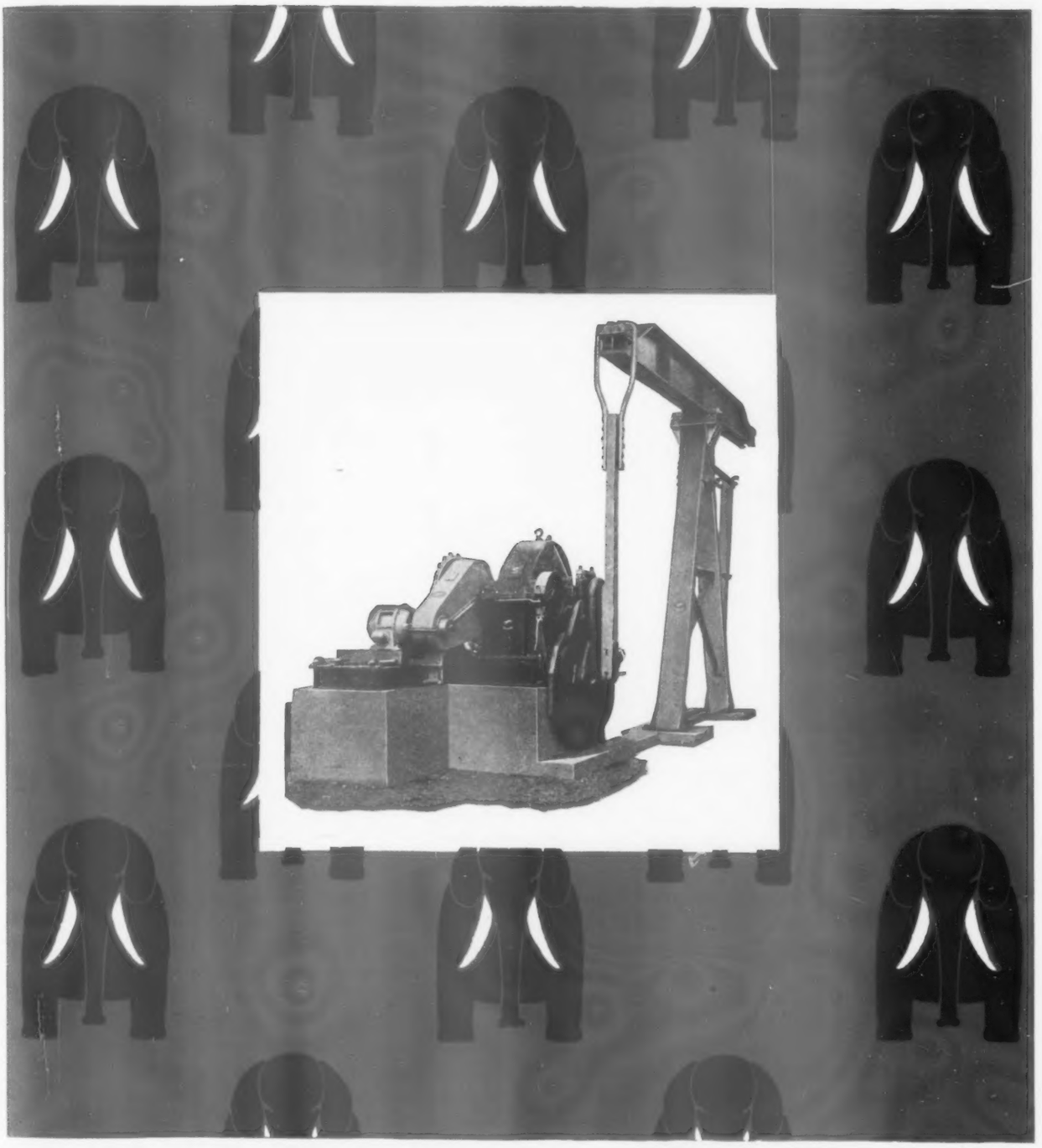


THE MODERN high pressure mud pumps demand the perfect pressure tight connections assured by Spengler Tool Joints. Machined to precision from special heat treated alloy steel, their accurate, clean cut threads grip and HOLD.

SPENGLER TOOL CO.
ROTARY Drilling TOOLS
GENERAL OFFICES AND
PLANT, OKLAHOMA CITY

SPENGLER

ROTARY CHAIN, ROCK BITS, CONES



PUMPING POWER

The heaviest loads can be easily handled with the Ideco Geared Unit. It transmits the necessary power quietly, economically and efficiently. Delivers 96% of the power at full load with 100% overload capacity for starting and intermittent periods. The Ideco Geared Unit is but one of the pumping units designed and manufactured by Ideco. Ideco also builds a Chain Rig for those who prefer this type of pumping unit. Complete literature on these modern Power Units on request.

THE INTERNATIONAL DERRICK & EQUIPMENT CO.

Columbus, Ohio; Marietta, Ohio; Beaumont, Texas; Los Angeles, Calif.

New York Wichita Tulsa Oklahoma City Fort Worth Houston Shreveport Torrance
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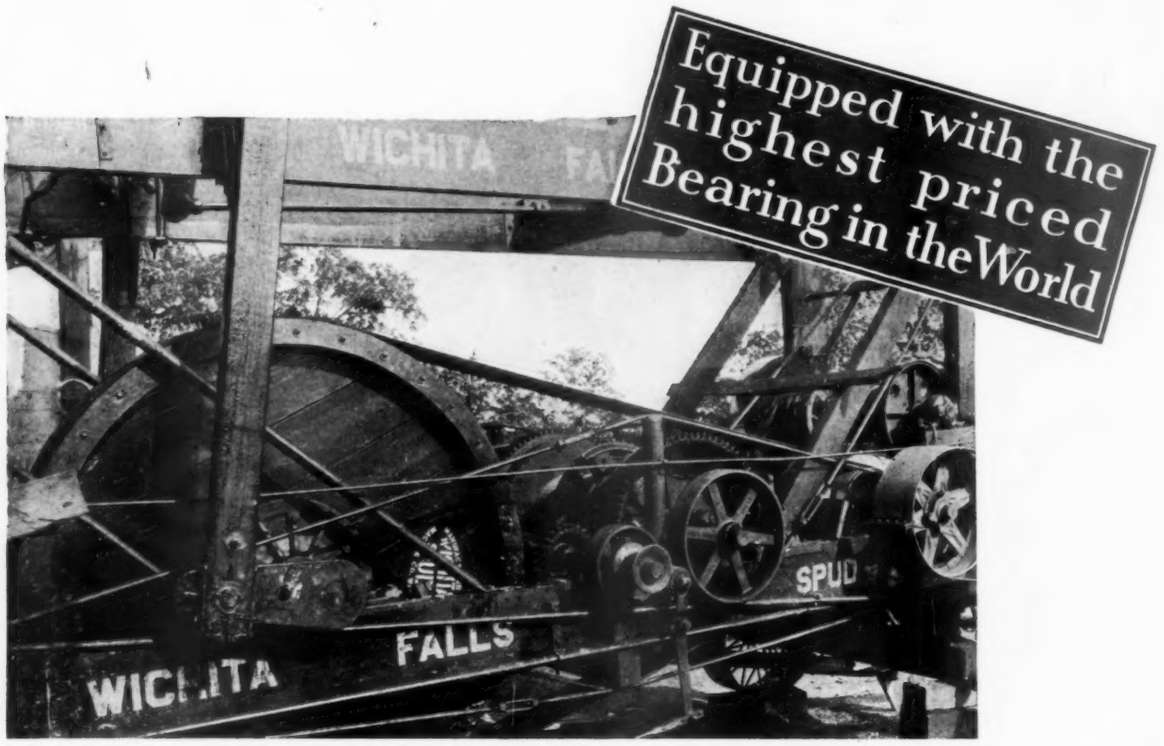
Branches in Every Important Oil Field

731

ANOTHER MANUFACTURER IN THE OIL INDUSTRY THAT USES SKF BEARINGS

CLARK MACHINE COMPANY



NOTHING "JUST AS GOOD" COMPARES WITH SKF BEARING PERFORMANCE

AND in the oil fields too, "A promise is only a promise but . . . PERFORMANCE is History! Hour after hour, day after day, SKF Bearings on equipment in this industry show the same consistent, dependable *performance.* And they do it not for six months but year after year. Is it any wonder that Performance takes preference over price . . . and the Clark Machine Co. uses 10 SKF Ball Bearings in its Wichita Falls Spudder?

More and more, builders of machinery for this tough service are turning to and users are looking for SKF. They know what it means to have equipment on the job which is unquestionably free from bearing trouble in brute service. SKF Bearings show no wear, need no adjustments. Running seemingly without effort, they never draw attention to themselves. *Such performance is the only thing that counts in a bearing!*

SKF INDUSTRIES, INC., 40 East 34th Street, New York, N. Y.

2621

EQUIPPED WITH THE HIGHEST PRICED BEARING IN THE WORLD

Means just this

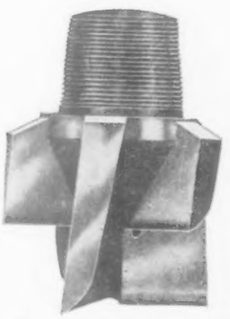
SKF

Ball and Roller Bearings

That the manufacturers whose product is illustrated above preferred to pay more for their bearings and less for servicing or replacing them. They preferred to pay a higher price in the beginning than many times this higher price in the end. And, finally, they preferred to economize by using SKF bearings because they are made to do their job, not to fit a price list.

ASK

Any operator in the Oklahoma City field how much these bits are saving every day.



Pat. Pending No. 428542

Brewster

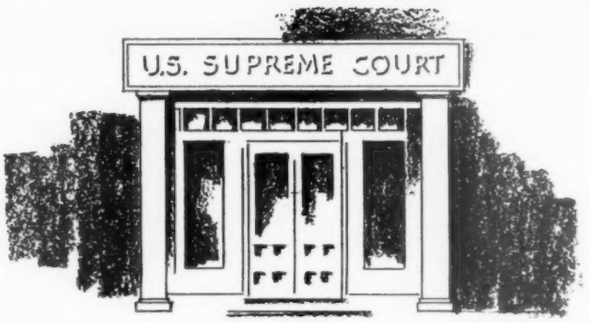
Straight Hole

Rock Bits In All Sizes

Ask about other Brewster A. P. I. Products: Shouldered Tool Joints; Frictionless Tool Joints; Fish Tail and Special Gumbo Bits; Special Rock Bits; Core Barrel with Cutter Heads for both hard and soft formations. Cutter Heads for hard formations are faced with chemical substances which make them hard as diamonds! Write for descriptive catalog.

The Brewster COMPANY~INC.
Shreveport, Louisiana

COMPLETE STOCK carried at these warehouses: Iverson Specialty Co., Oklahoma City, phone 2-2833; Houston Store, 2000 Harrington St., phone Capitol 3021. *Distributors:* Wilson Supply Co., Houston, Beaumont and Luling, Texas; Continental Supply Co., all stores; Murray-Brooks Hardware Co., Lake Charles, Louisiana; T. T. Word Supply Co., Houston, Texas, and Lake Charles, Louisiana; El Dorado Foundry, Machine and Supply Co., El Dorado, Arkansas.



The Highest Authority on OIL Treating

The Tret-O-litE Process was the first commercially successful method of recovering oil from "cut oil," and has been used to recover millions of barrels of oil from an almost infinite variety of petroleum emulsions. Because of unequaled experience, coupled with extensive laboratory and manufacturing facilities, the Wm. S. Barnickel and Company organization is the highest authority in oil treating problems, just as an opinion from the U. S. Supreme Court is final in matters of law.

WM. S. BARNICKEL & COMPANY
Offices and Plant: Webster Groves, St. Louis County, Missouri

Tret-O-litE

Reg. U. S. Pat. Off.

SINCE 1842

PERFORMANCE UPHOLDS ITS REPUTATION

NEW BEDFORD
"NONE BETTER"
PURE MANILA

CAT LINES

(Look For The Red and Black Marker)

Specially laid and constructed for cat-line use.

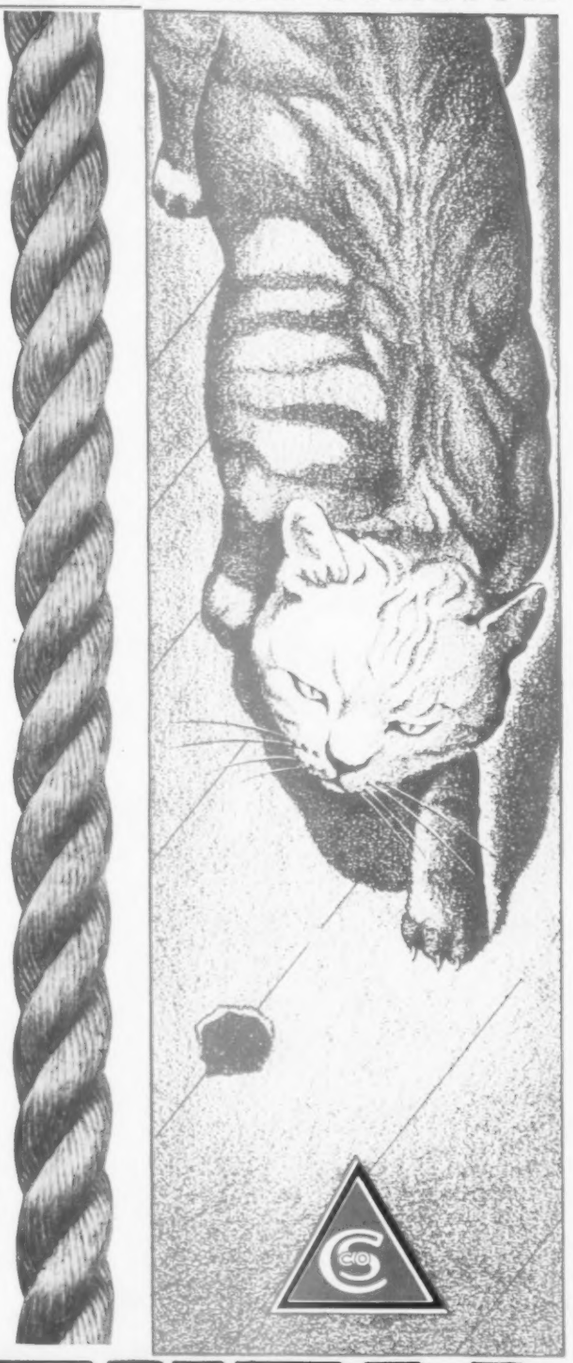
Each end whipped; will not fray out or unstrand.

Each line individually rolled and burlapped at mill.

Made water resisting for all weather service.

Cost no more than ordinary lines.

For eighty-eight years New Bedford Cordage has remained the finest cordage possible to produce. Such a reputation can endure only when a product of merit gives unsurpassed and lasting service.



"If Continental Sells It . . . . There Is No Better"

THE CONTINENTAL SUPPLY COMPANY

General Offices: ST. LOUIS 923J

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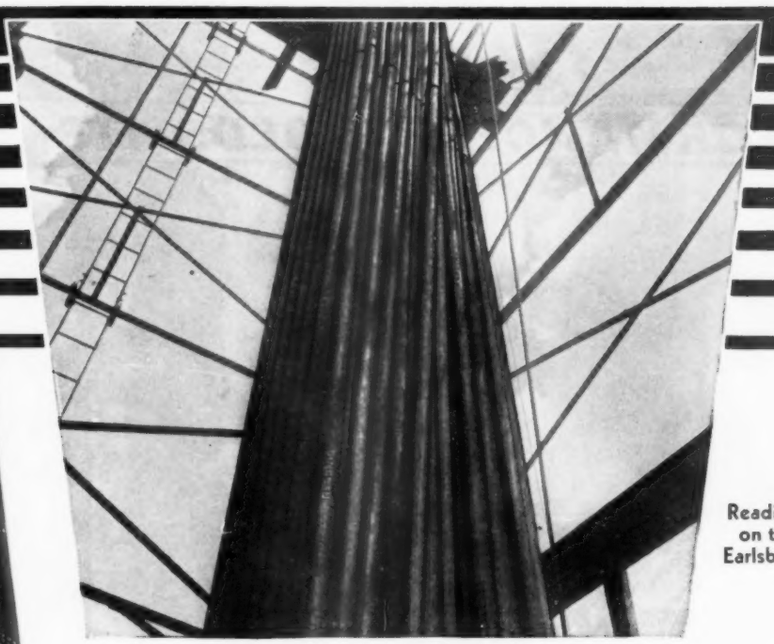
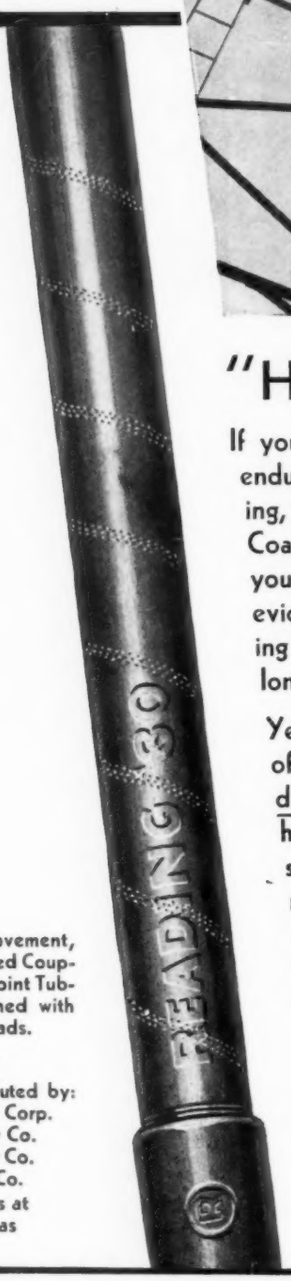
CONTINENTAL



Reading Tubing on the job at Earlsboro, Okla.



"Hard Boiled" Evidence

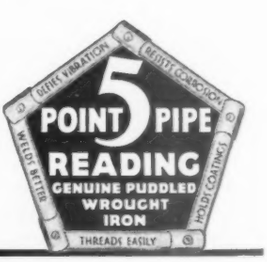
If you want to know the facts about the superior endurance of Reading 5-Point Galvanized Tubing, go to the toughest fields—Seminole—Gulf Coast—El Dorado, Kansas—West Texas. Here you'll find a convincing mass of "hard boiled" evidence—evidence which shows that Reading 5-Point Tubing lasts from two to five times longer than ordinary tubing!

Yet there's even better proof! Being made of the original, time-tested, Genuine Puddled Wrought Iron, Reading 5-Point Tubing has a record of rust-resistance which stretches back for generations! There's no guesswork about the service this pipe will give. Insist on getting Genuine Puddled Wrought Iron, identified by the Reading name and cut-in spiral knurl mark.

As an added improvement, all Reading Galvanized Couplings for Reading 5-Point Tubing are now furnished with galvanized threads.

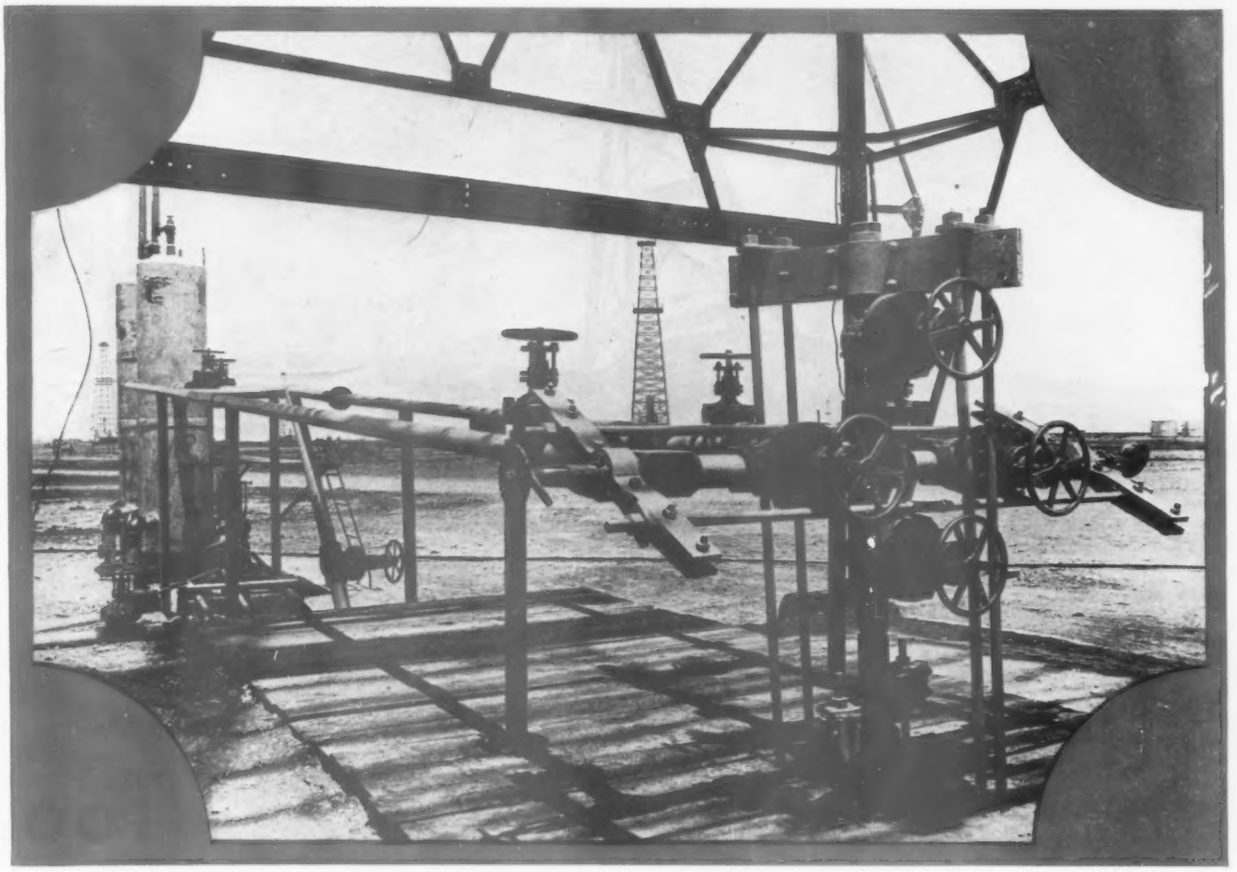
Reading pipe distributed by:
Frick-Reid Supply Corp.
Bradford Supply Co.
Republic Supply Co.
Superior Tube Co.
Our own stocks at Houston, Texas

READING IRON COMPANY
Reading, Pennsylvania
Atlanta . Baltimore . Cleveland . New York
Philadelphia . Boston . Cincinnati . St. Louis
Chicago . New Orleans . Buffalo . Houston
Tulsa . Seattle . San Francisco . Los Angeles
Detroit . Pittsburgh . Greensboro, N. C.
Kansas City



GENUINE PUDDLED WROUGHT IRON
READING PIPE
DIAMETERS RANGING FROM 1/8 TO 24 INCHES

Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Wrought Iron



A 100% Kerotest Valve and Fitting Installation Protects this $20,000 per day Oil and Gas Producer

« « « « « « « The Ohio-Independent Northrup No. 1 Well at Hobbs, New Mexico, which came in with an initial flow of 9,000 barrels of oil and 48,000,000 cubic feet of gas, is one of the many good producers throughout the petroleum world equipped with Kerotest—the famous kerosene-tested valves.

Here is a certified line of valves that has never been known to fail—just one of the many reasons it enjoys the explicit confidence of drillers and operators everywhere.

KEROTEST

KEROTEST MANUFACTURING CO., PITTSBURGH, PA.

Carried in Stock and Sold by

NORVELL-WILDER SUPPLY COMPANY, Houston, Beaumont, Shreveport, Fort Worth

OIL WELL SUPPLY COMPANY

Branch Stores and Offices throughout the World

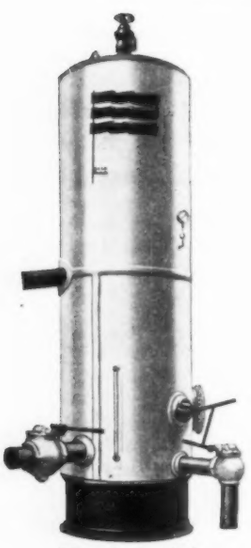
The Float That Won't Sink MAN-SIZE, Too!

Guarding the ships at sea, the buoy is a huge he-man float that is ever on duty. The float in an Oil and Gas Separator is an essential part, and it, too, must ever be on duty.

In the Improved AMERICAN Oil and Gas Separator the float is man-sized. It has the capacity of 10 times the small outside ordinary float used on Oil and Gas Separators, and much is accomplished thereby. The operation is more certain—the capacity is greater. It works more quickly and automatically because it has greater SIZE and LEVERAGE, and its positive operation in closing the valve tends to prevent the gas from leaking through into the stock tank. Therefore, greater efficiency in opening and closing the valve.

This float has been thoroughly tested hydrostatically to twice the working pressure of the Separator in which it is installed. It has been tested externally at a factor of safety of three to one, which is an assurance that it will not collapse in operation when used in the Separator.

It is placed below the foam baffle which protects it from the sand.



May be rolled like a Barrel!

The Improved AMERICAN Oil and Gas Separators

"See American First"

Equipped with the B.S.&B. Spray Condensers

The operation of this great AMERICAN assures BONE-DRY GAS, in addition to greater capacity of oil separation. The Dry Gas that escapes means that the Separator has stripped all the oil from the gas.

The B. S. & B. Spray Condenser plays a great part in stripping the oil from the gas and is another exclusive feature found only in the Improved AMERICAN. Its efficient operation is making the AMERICAN more popular in the Oil Fields!

We're willing to convince you if you will give us the opportunity. "See AMERICAN First" and you'll forever be 100% for AMERICAN. Write us, Dept. AA-14.

American Tank & Equipment Corp.

A SUBSIDIARY OF

BLACK-SIVALLS & BRYSON, Inc., Bartlesville, Okla.

OKLAHOMA CITY — OKLAHOMA

(Formerly American Tank Company)

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the NEW 164' EMSCO HI-TEN DERRICK

Handles 120 Ft. stands of Drill pipe

Equipped with Fulcrum Balance

This new Emsco 164 ft. Hi-Ten Derrick with 26 ft. base saves a tremendous amount of time and labor when running in or coming out of the hole. It handles 120 ft. stands of drill pipe, with ample working clearance for the largest equipment.

Designed to rack 12,000 ft. of 6-inch drill pipe. Available in capacities up to 1,000,000 pounds safe load.

Write or wire us for detailed specifications, capacities, etcetera.

EMSCO DERRICK & EQUIPMENT CO.

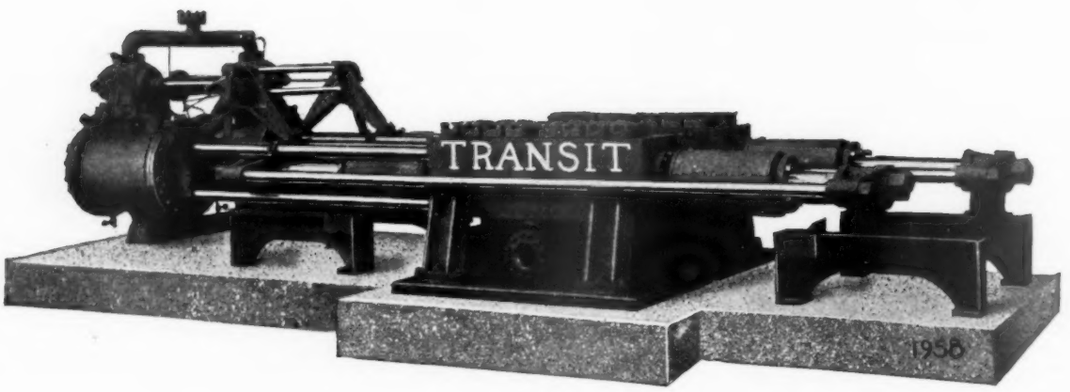
6701-7101 S. Alameda St. Los Angeles, California

Export Office:
CONTINENTAL EMSCO COMPANY, INC.
74 Trinity Place, New York City

All Emsco and D+B Products (Except Derricks) Sold Exclusively in Mid-Continent Fields by The Continental Supply Company.

EMSCO STEEL EQUIPPED WELLS ARE SAFE

Order TRANSIT HOT OIL PUMPS Now



Right now we have the engineering talent and manufacturing facilities available to give you the best of service, and you will get your pumping equipment in plenty of time for installation before the Spring rush of the refining business. Last Winter we worked day and night to keep up with the orders for TRANSIT Hot Oil PUMPS, but even then we were unable to meet the demand.

Put your plant in Competitive Condition by installing TRANSIT Hot Oil PUMPS

Los Angeles Tulsa Houston

NATIONAL TRANSIT PUMP & MACHINE CO. OIL CITY, PA.

New York Philadelphia Cleveland Pittsburgh

TULSA and MID-CONTINENT FIELD
Frick-Reid Supply Corporation

NEW ORLEANS, LA.
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LOS ANGELES
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ST. LOUIS, MO.
Reeves & Skinner Machinery Co.

Anchored like a stump *cannot* chip or break off ...

BLACKOR "roots" itself into the metal of your bit in a manner that prevents chipping or breaking off. It actually becomes a part of the steel, instead of merely fluxing over the surface. BLACKOR is so hard that it can only be applied with the carbon electric arc. It outwears ordinary hard-facings and inserts from 3 to 5 times.

BLACKOR presents a diamond-hard surface that is solidly resistant to abrasion. There are no unprotected spots to wear away under abrasive attack. It presents a solid cutting face that can be of any desired shape or hardness. Any competent welder can easily apply BLACKOR, usually at the rate of 100 square inches per hour. One ounce will cover approximately 4 square inches...making BLACKOR the most economical to use.

Greatest economy is also assured in the method of applying BLACKOR. Electric arc welding is 10 times cheaper than acetylene welding and this saving is greatly increased in isolated fields.

Your tools will spend many additional hours down in the hole...getting results...when protected by BLACKOR. Test it out Today and note the difference!

BLACKOR COMPANY

Head Office: 13007 South Main Street
Los Angeles, California

New York Export Office:
39 Cortlandt Street

Tulsa, Oklahoma Office:
219 South Jamestown Ave.

Houston, Texas Office:
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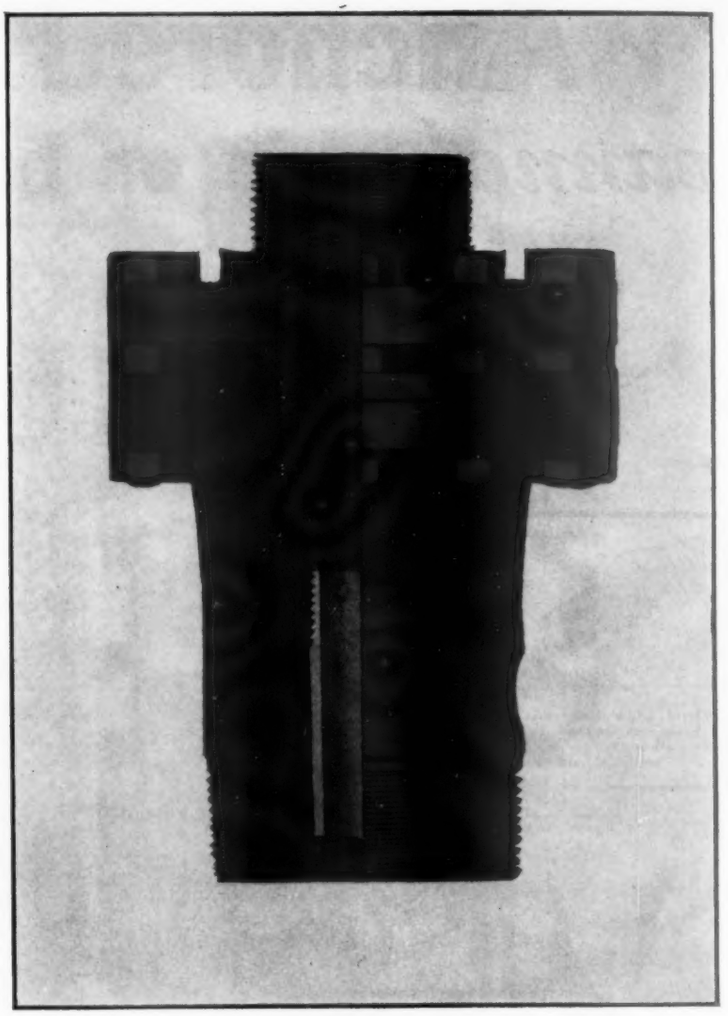
BLACKOR

The Super Abrasion-Resistant Facing

THE NEW REGAN ADJUSTABLE TYPE TUBING HEADS



You Can Now Move Your Tubing

With this new Adjustable Tubing Head it is possible to attach devices for moving the tubing under pressure without killing the well or releasing the pressure between the tubing and the casing. The operation is accomplished by plugging the tubing and removing only the uppermost flange with the Christmas Tree. The lower flange remaining intact retains the seal and allows installation of the Regan Tubing Gas Controller or other similar devices,—another Regan development to meet your requirements.

New York Office
75 West Street
Wm. Braat, Manager

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Oil Field Equipment
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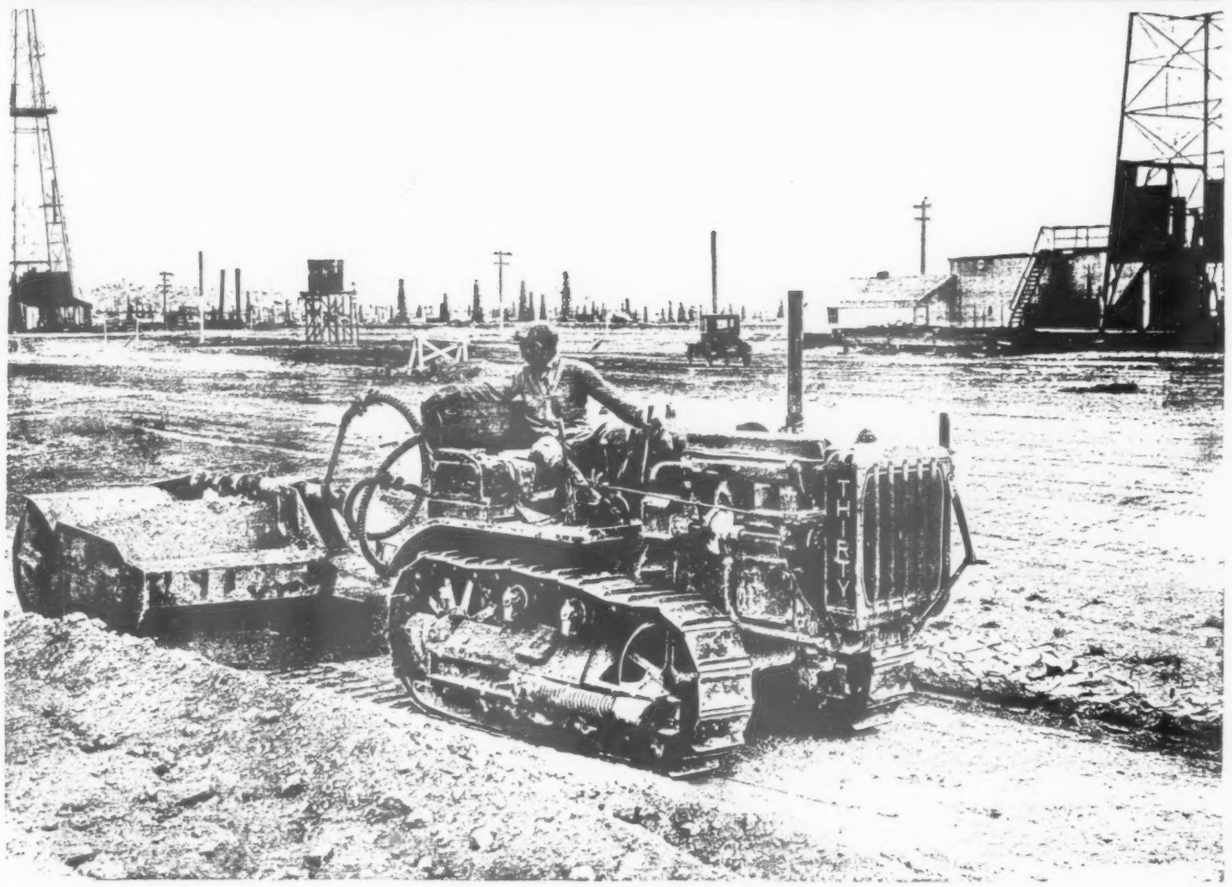

when OIL MEN move earth

Prices—f. o. b. Peoria, Illinois

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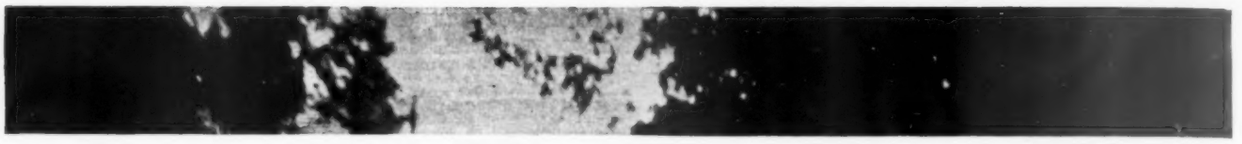

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The OIL WEEKLY

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VOLUME 59, NO. 12

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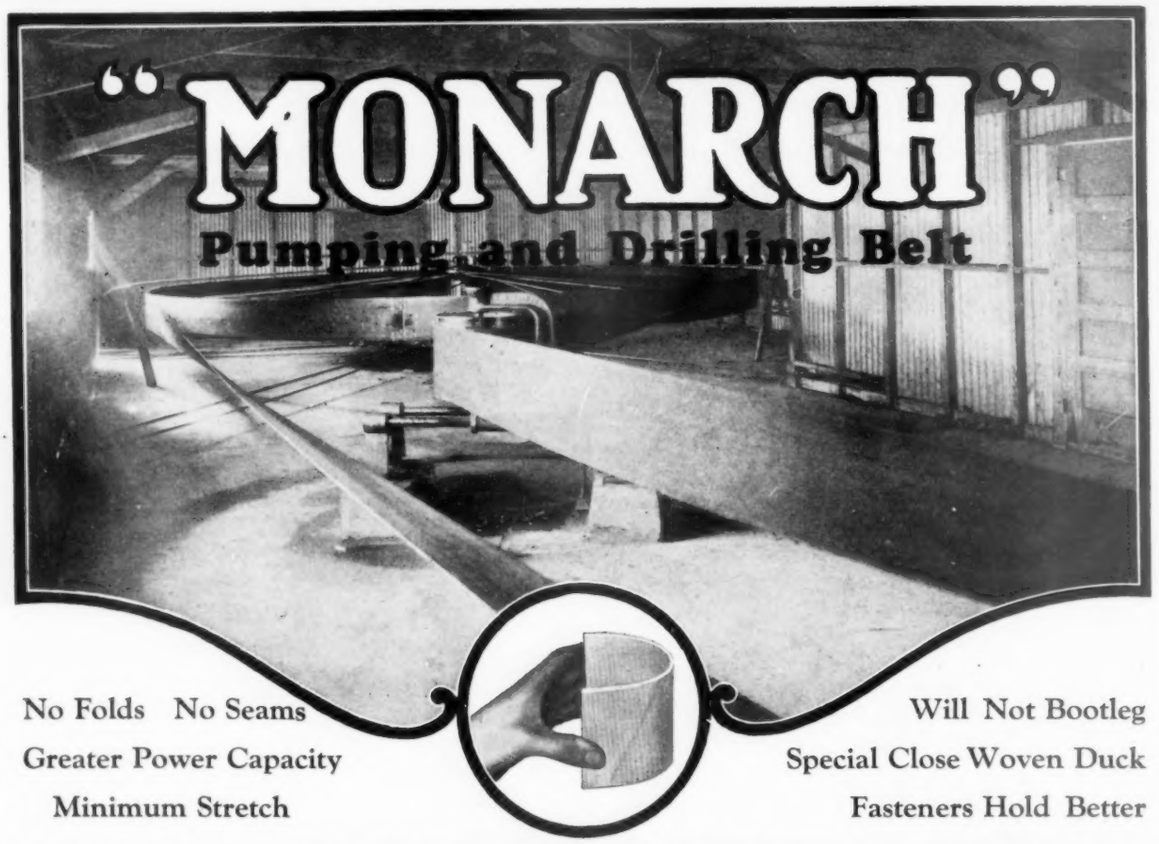

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THE OIL WEEKLY

VOLUME 59, NO. 12 DECEMBER 5, 1930

California Curtailment Again Reaches Critical Stage

By BRAD MILLS
Staff Representative

Los Angeles.—California's gas conservation law has been held constitutional by the district court of appeals at Los Angeles, which ruled that the temporary restraining order issued earlier in the year by Superior Judge Hazlett should stand against Santa Fe Springs operators. The ruling dissolved the writ of the same court which prevented the superior court's restraining order from limiting gas waste at Santa Fe Springs insofar as certain defendants were concerned and which was granted as temporary relief until the court could determine the merits of the defendant's claims as well as the validity of the act.

The court stated that the law is not as stringent as in other jurisdictions, that is clear in its meaning and that the best interests of the public and the operators can be served by its enforcement.

LOS ANGELES.—Curtailment in California has again reached a dangerous stage, and a revision of the present plan is being considered in an effort to balance supply and demand. The ratio of purchases and production to refinery and market needs has entered into tentative negotiations and an allotment to share the burdens imposed by heavy purchase contracts is not improbable. Several companies have been purchasing a high percentage of the total crude handled, and, in tracing this to ultimate markets, have been faring much worse than the companies producing nearly all of their oil. The purchasing companies which have been forced to store much of the purchased crude have been particularly handicapped. A tentative plan for bringing about a balance between purchases and production is being considered.

The ideal theoretical condition would be an exact balance between production and market needs, with the producing companies supplying all of their oil. The next best condition under the purchase-and-production plan of operation would be an exact balance between purchases and production and market needs. In both cases, there would be no carry-over and consequently no over-production. In sharp contrast to the ideal condition, two or three companies have been purchasing more crude than they produced, meanwhile having to store some of the aggregate. These companies are refiners and marketers, as well as producers and purchasers, and have not been operating as profitably as the companies producing most of their oil. In many instances contracts call for the purchase of the entire production of certain companies in various fields. A few California companies have been able to balance almost exactly their production and purchases with their market needs. With these companies, curtailment has been a distinct benefit. On the other hand, a few of the most ardent supporters of the curtailment program have been purchasing a high percentage of total oil handled, only to have a large part of the aggregate go to storage.

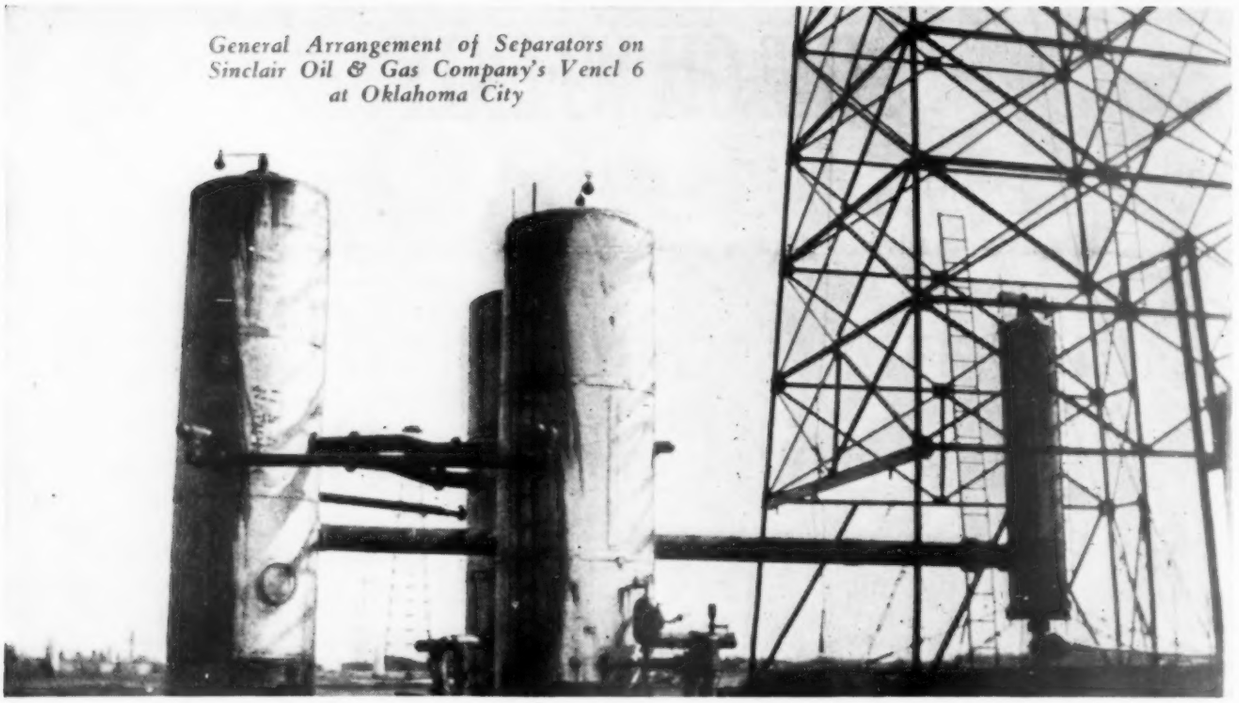
The proposed revision involves a long and tedious process which takes into consideration probable purchases, as well as production. Little progress has been made in this direction, however.

The companies now purchasing a high percentage of the total oil handled include Richfield Oil Company, Union Oil Company, Standard Oil Company and General Petroleum Corporation. During October, Union Oil Company purchased just under 2,000,000 barrels of oil and produced less than 1,400,000 barrels; Richfield Oil Company purchased 1,171,000 barrels and produced only 695,000 barrels; Standard Oil Company of California purchased 1,750,000 barrels and produced 2,658,000 barrels, and General Petroleum Corporation purchased 851,000 barrels and produced 981,000 barrels. Shell Oil Company fared well, purchasing 414,000 barrels and producing 1,485,000 barrels, while Associated Oil Company made about the same showing with purchases of 448,000 barrels and production of 1,413,000 barrels. It is interesting to note that total purchases of smaller companies was only a very small percentage of the combined purchases and production of these companies.

Danger of crude price reductions is evident, with California oil bringing a higher price than corresponding grades in certain Mid-Continent fields. This difference is beginning to lead to trouble, since it is a difficult matter to compete along the Atlantic seaboard with operators obtaining cheap crude for conversion into gasoline and fuel oil.

A reduction in California's allowable to some figure around 525,000 barrels is being considered, but the need of at least partial elimination of the difference between the present allowable of 540,000 barrels and an actual output of 600,000 barrels appears just as much a necessity. The winter demand has not made possible the reduction of stocks along certain lines and the present production is out of line with actual requirements.

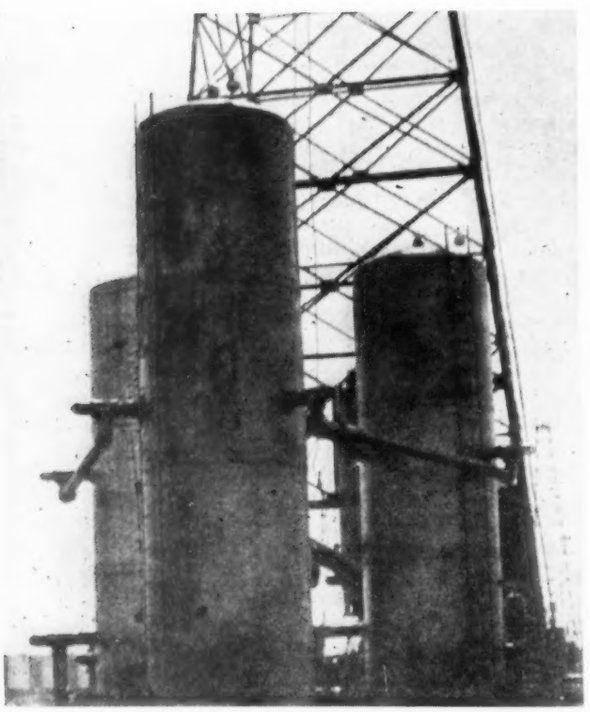
Increase in cracking of the heavier crudes and fuel oil has been responsible for a slightly smaller demand for light crude. Playa del Rey has been furnishing above 35,000 barrels daily, of which a large part has been used in cracking processes. This field is producing at capacity and is a big factor in a weaker market structure.



General Arrangement of Separators on Sinclair Oil & Gas Company's Vencl 6 at Oklahoma City

Hook-Up to Handle Sand Blast At Oklahoma City

By FLOYD SWINDELL
Staff Representative



Showing method of terminating swing connections with bull plugs

A METHOD of flowing wells, in part a refinement of the "mud hog" method, but differing from anything that has been done in the past, has recently been devised and installed on Sinclair Oil and Gas Company's Vencl 6, SE NW SE, Section 31-11n-2w, in the Oklahoma City pool. A change in hook-up became necessary when sand started cutting through the separator walls above the top baffle plate. It is understood that like installations are being made by several other operators who have had the same difficulty.

The hook-up consists of a six by 25 foot separator, especially designed to act as a "sand trap" and set to the rear of the regular separators; a "sand hog" made from a plain three by fifteen foot separator set directly over the well by means of flange connections; and two regular seven by 22½ foot separators. A 6⅝ inch bull plug, filled with babbitt, is placed in the top of the "sand hog" and securely anchored by means of a casing clamp and two turn-buckle rods. A 10-inch bull plug is screwed into the side to facilitate stabbing of the bailing nipple and permit removal of large fragments of sand or mud.

The flow of oil and gas is conducted from the "sand hog" through a 15½ inch pipe to the "sand trap" where initial separation takes place. Gas is carried from this point through two 8¼-inch swing type lines back to the main separators. Oil is carried through two 10-inch lines from the "sand trap" to the separators. All dead ends of the flow lines are terminated with long bull plug nipples to eliminate any concentration of sand cutting at 90 degree

turns. The method has eliminated cutting in the separator walls, has been successful in settling most of the sand in the "sand trap" and has decreased the velocity of flow to such an extent that any sand passing to the separators is robbed of most, if not all, of its cutting power. In addition to these advantages the efficiency of separation has been increased. The method was devised by engineers of National Tank Company, Tulsa.

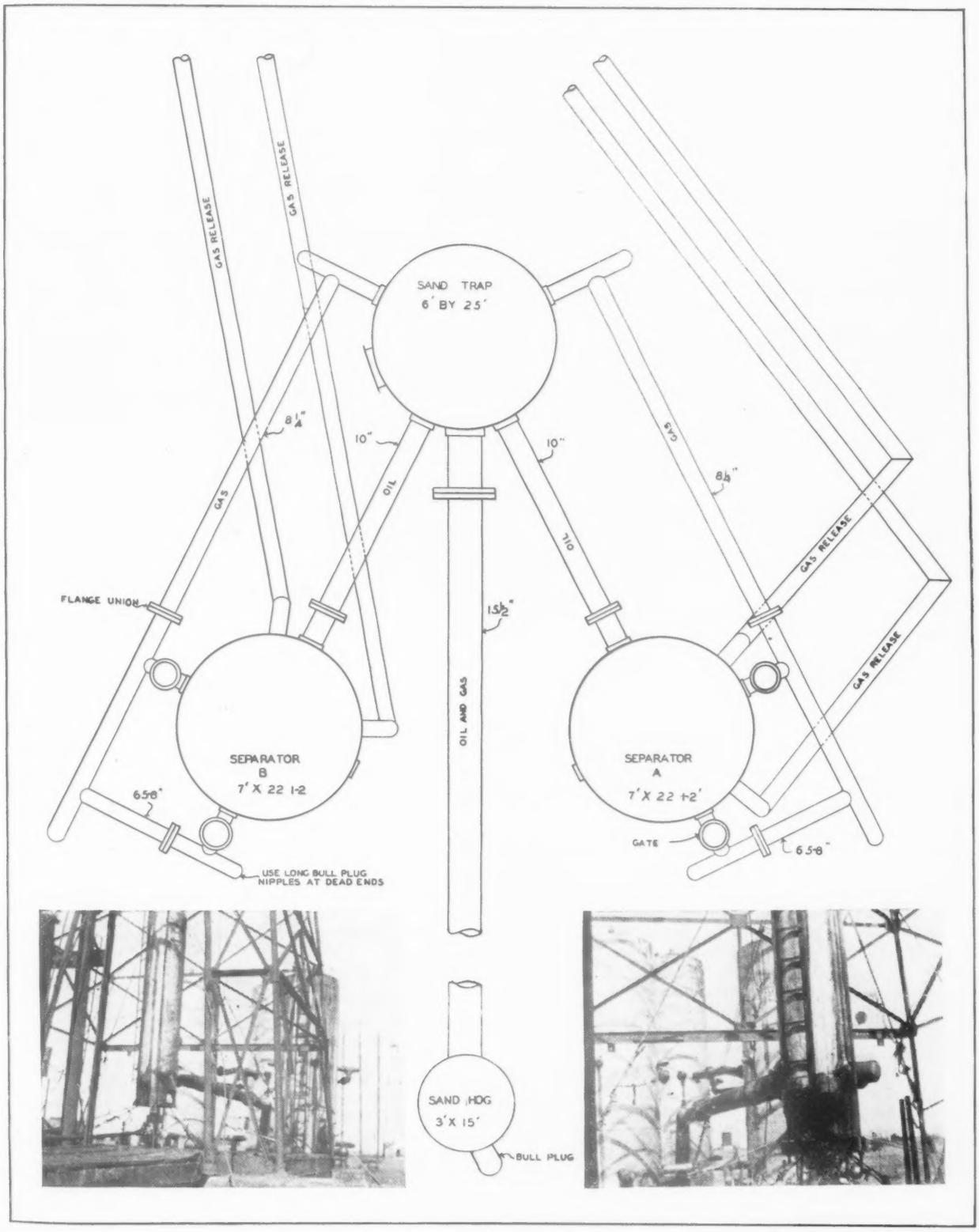


Diagram shows the flow arrangement while insert photographs show detail of the mud hog

Appeal Court Upholds Hoover's Oil Conservation Policy

WASHINGTON, D. C.—Issuance by Secretary of the Interior Wilbur of orders to general land agents to reject some 5000 pending applications for prospecting permits on government oil lands, under President Hoover's oil conservation policy, today was held to be legal by the District of Columbia Court of Appeals, reversing the judgment of the lower court. The judgment was not unanimous, a dissenting opinion being rendered in which the secretary was held to have exceeded his powers.

"The president was in a position to know when the public interest required particular portions of the people's lands to be withdrawn from entry or location," the court declared in its majority opinion. "His action inflicted no wrong upon any private citizen and, being subject to disaffirmance by congress, could occasion no harm to the interest of the public at large. In the present case, his orders, issued through Secretary Wilbur, were intended to meet an emergency occasioned by the great over-production of oil and gas, the waste incident thereto and other public considerations. It would take a very clear case to justify a court in arresting and suspending the action of the executive taken in the public interest. The record does not present such a case."

The case decided December 1 was brought by Roy G. Barton, who had filed an application at Las Cruces, New Mexico. Four other cases, however, involving the same subject, are affected by the court's opinion. A feature of the cases, which aroused considerable attention throughout the public land states, was the filing of briefs, as "friends of the court" by the attorneys general of Wyoming, New Mexico and Colorado, in which the action of the secretary was opposed. The decision discussed the right of the president to speak through the heads of the several departments and reached the conclusion that the orders of the secretary gave effect to the previously announced policy of the president, were acquiesced in by him and were in legal contemplation the acts of the president. It was pointed out that under the leasing act of 1920 it was no longer possible to go upon public lands to prospect for oil or gas unless permitted to do so by the secretary, although in the past such prospecting was unregulated. Whereas formerly, it was pointed out, a citizen need only discover minerals, stake his claim and record notice properly to have his rights fixed, under the leasing act he must apply for the privilege of prospecting, and until a permit is granted has no vested interest.

"It is apparent," the decision held, "that congress recognized that the mere filing of an application for a permit confers no vested rights upon the applicant, but that if a permit be issued and he goes on the land and makes a discovery he has such an interest as must be recognized. Congress, of course, knew that if changed conditions rendered advisable the temporary withdrawal by the executive of the public lands from further exploration, thousands of such applications for permits might be pending. It was careful, therefore, to distinguish between an application for a permit and the rights that might be acquired under an issued permit."

In the dissenting opinion it was held that the president's statement of policy was without standing, since the mere announcement in a press interview that conservation would be followed is "merely the statement of a future policy which may or may not be adopted and would have to be put into effect by a formal proclamation by the president before it could justify in the remotest degree the action taken by Wilbur."

Wilbur Report Says Industry Not Hurt By Withholding Government Lands

Washington, D. C.—No real injury to the oil industry was caused by operation of the oil conservation policy of the president, it is declared by Secretary of the Interior Wilbur in his annual report. Although the number of prospecting permits outstanding was reduced from approximately 17,500 on March 12, 1929, when the president's oil conservation policy was put into effect, to 5094 at the close of the fiscal year on June 30, last, during that time permits had been granted and extended wherever equities demanded it, it is asserted, and in no case had any permit been canceled where there had been compliance with the requirements of the law.

"The conservation policy has resulted in blowing a great deal of speculative paper off the public domain," the secretary states. "But there has been no real injury to the oil industry thereby in any of the seven oil-producing public-land states. Each year during the last three years more wells have been shut in because of lack of market than have been brought into production. On July 1, 1930, there were shut in, in those seven states, 6190 wells, including 599 on the public domain; whereas new wells brought into production during all of 1929 and the first six months of 1930 numbered only 1898, including 282 on public land.

"In other words, over three times as many wells were shut in on July 1 as had been brought into production during the preceding 18 months. If wells were being shut in more rapidly than new wells were being produced it is not apparent that further prospecting would result in anything but an economic waste of any oil which might be produced. And in every state except Idaho, the number of shut-in wells on July 1, 1930, was greater than the number shut in when the conservation policy became effective.

"It would be unfair, however, to make the inference from these figures too sweeping in view of the very large factor played by the single State of California, which is responsible for 5431 of the shut-in wells and 1562 of the new ones. But even if California is eliminated from the list the number of wells shut in exceeds the new wells brought into production during the period mentioned."

Texas Quarterly Report Shows Crude $1.07 per Barrel

AUSTIN, Texas.—Seventeen producing companies in Texas account for 60 per cent of the oil production in Texas, according to gross production tax returns released late last week covering the third quarter of 1930. Ten of these companies (see page 107) accounting for approximately half of the total for all companies.

Total production reported to the comptroller's department was 77,506,340 barrels, valued at $82,811,993, or $1.07 per barrel.*

The Humble Oil & Refining Company and Gulf Production Company were close contenders for first place with 7,519,384 and 7,377,163 barrels, respectively, while The Texas Company, with 4,433,591 barrels, was third. How these figures compare with previous reports is shown in the tabulation to which reference is made above.

*Oklahoma production for the quarter was valued at $1.36 per barrel, see THE OIL WEEKLY, November 28, page 23.

Mexico's Future Petroleum Possibilities

By JACK LOGAN
Staff Representative

Nuevo Leon and Tamaulipas Have Many Prospective Oil Structures

MONTERREY, Nuevo Leon, Mexico.—The northern and northeastern portions of Mexico, including the states of Tamaulipas, Nuevo Leon and Coahuila, immediately south of the Rio Grande, are still practically unscratched from the standpoint of oil development. There has been a little drilling, and some oil and gas showings have been found, but the wells which have attained interesting depths may be counted on the fingers of one's hands.

This region constitutes a domain with vast possibilities of oil production. Structures with promising conditions are present in large numbers, many of them only short distances from producing fields in the United States; and one geologist, minutely familiar with the structures in Nuevo Leon and Tamaulipas, does not hesitate to predict that those two states alone will ultimately yield a billion barrels of oil.

Whether that prophecy is too optimistic or not, it reflects the seriousness with which Northern Mexico is looked upon by at least one competent geologist, and his optimism may well be understood when one becomes familiar even in a general way with the region.

The accompanying map, tables and well information will give a clear picture of the situation in Nuevo Leon and Tamaulipas, and the picture will be rounded out with details in this paper, dealing specifically with the structures and operating concessions in those two states. Due to the limited scope of a single article, similar information on Coahuila will be reserved for a later paper, and that state will be mentioned only casually in this article.

The states of Tamaulipas and Nuevo Leon lie south of the Rio Grande, and their borders extend northwesterly from the mouth of the river to a point a short distance above Laredo, Texas. Nuevo Leon is bordered on the northwest by the state of Coahuila, which extends on to the northwest beyond Del Rio, Texas, the mouth of the Pecos River, and the "Big Bend" country.

A street scene in Monterrey

This Week

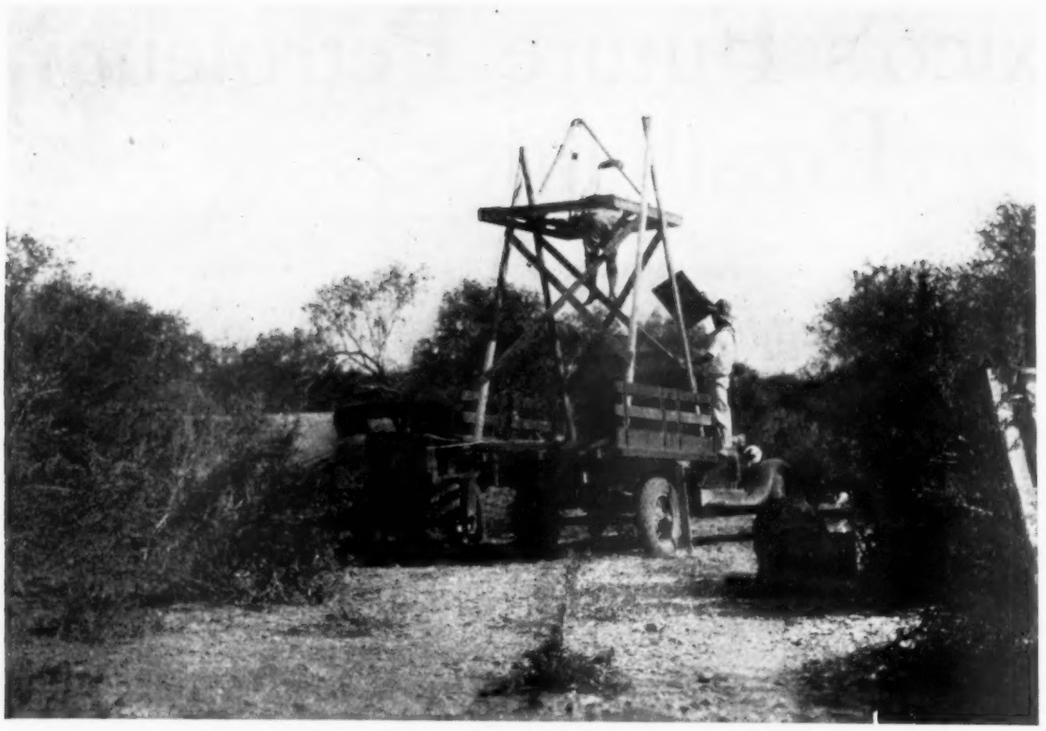
Detailed information is presented on the numerous structures which are known to exist in the states of Nuevo Leon and Tamaulipas along the northern frontier of Mexico. These structures, in the opinion of one competent geologist who is familiar with them, will ultimately yield a billion barrels of oil; and they are of particular interest at this time, for increased development work on them is in prospect for the immediate future, due to expenditure requirements which are made in concessions held by oil companies under the new petroleum law.

Later

Next week there will be an article on the structures and petroleum development in the state of Coahuila—and subsequent articles will discuss the petroleum laws and regulations and operating costs in Mexico; give details about the deep test on Guerrero dome, which is mentioned in this issue; and present further information about Monterrey, which has become headquarters for oil operations in Northern Mexico.

At a distance roughly 150 miles southwest of Laredo, but less than that distance from the nearest point on the Rio Grande, just outside the western edge of the city of Monterrey, Nuevo Leon, Mexico, is the jagged Sierra Madre Oriental mountain range, stretching away to the northwest and to the south. In the northwesterly direction the Sierra Madre range extends through Coahuila and into the "Big Bend" country of Texas in the United States, becoming a part of the Rockies. To the south these mountains extend through Nuevo Leon and thence into Tamaulipas, San Luis Potosi and Vera Cruz, west of the Panuco district oil fields, which lie immediately west of Tampico, and of the South Fields. Those oil producing structures west and south of Tampico are related to the mountain folding east of the Sierra Madre range, and likewise the structures in Tamaulipas, Nuevo Leon and Coahuila are controlled by that same range and adjacent folding.

The northern boundary of Coahuila is formed by the "Big Bend" of the Rio Grande, which in turn lies due south of the Crane-Upton and Pecos County oil fields of West Texas. That northern portion of Coahuila is rugged, and within it many structures favorable for oil accumulation are known to exist. The most extensive formation in the state is Commanche limestone, and there is evidence pointing to possibilities of production from formations of that age while it is also regarded as possible that deeper production may be secured from Permian



Near China, Nuevo Leon. One of Continental Oil Company's crews doing geological work.—Built tower to see over mesquites and bushes.

and Pennsylvanian rocks. The information on Coahuila in this paper will be limited to the above general statements.

Nuevo Leon and Tamaulipas

The Nuevo Leon-Tamaulipas region lies nearer the Gulf of Mexico, and it is covered by younger formations than those at the surface in Coahuila. East of the Sierra Madre Oriental mountain range, as stated above, are some other mountains which are broken and of lesser magnitude, such as the Lampazos, Vallecillos, Picachos, and Papagayos, lying immediately northeast of Monterrey, and farther south the Tamaulipas Mountains. Those mountains are built of Cretaceous limestone. Between them and the Rio Grande on the northeast and the Gulf of Mexico on the east is a vast undulating plain which constitutes the Mexican part of the geologic province known as the Rio Grande Embayment.

Within that area are the numerous structures of Nuevo Leon and Tamaulipas on which over half a dozen major oil companies and numerous individuals and smaller concerns have staked large investments. Immediately adjacent to the mountains, that area is covered with Cretaceous sediments, as are the mountains themselves, but a little farther eastward one finds younger sediments, the Cretaceous formations being covered by the Eocene sediments of the lower Tertiary. The line of contact between the Cretaceous and the lowermost Eocene formation, the Midway, (shown on the accompanying map), crosses the Rio Grande into Coahuila at a point about 32 miles south of Piedras Negras-Eagle Pass, and it trends southward roughly along the Nuevo Leon-Tamaulipas state line, more or less parallel to the Rio Grande, at a distance of 10 to 20 miles from the river. It maintains that same directional trend with little variation to the northern end of the Tamaulipas Mountains, which skirts to the eastward. The Rio Grande, however, swings more sharply eastward in the region of Roma.

East of the above contact line the Eocene sediments are at the surface all the way to the Rio Grande, and they continue at the surface in the region south of Roma, Texas, as far eastward as Rio Grande City, Texas, and Camargo, Tamaulipas, beyond which they are covered by the Oligocene sediments. Southward from Rio Grande City and Camargo, the Eocene-Oligocene contact (also shown on the accompanying map) extends almost due south toward the Tamaulipas Mountains, nearly converging there with the Cretaceous-Eocene contact. It is within this area covered at the surface with the shales and sandstones comprising the Eocene Tertiary that the preponderant number of promising structures of Tamaulipas and Nuevo Leon are located—among them being such well known structures as Guerrero dome, the Roma and Ochoa (or Pescado) structures and the Aldamas area.

There are, however, several structures still farther eastward, in the region covered at the surface with Oligocene formations. That region of Oligocene exposure is about 30 miles wide along the Rio Grande River, extending eastward from Rio Grande City, Texas, to Reynosa, Tamaulipas (south of McAllen, Texas); but it narrows down toward the south to a width of about 15 miles. East of this area is the surface exposure of the Reynosa formation—a relatively young sediment, made up of sands. The Reynosa acquired its name from its exposure at the above mentioned town of Reynosa, Tamaulipas, which was founded in the early period of Spanish settlement in Mexico.

Escalera-Aldamas Terrace

A major feature of northernmost Tamaulipas and eastern Nuevo Leon is the Escalera-Aldamas Terrace—an enormous terrace, flat on top, and with 5000 feet of steep east dip, following the trend of the mountain folding west of it. It starts at a point west of Laredo, extends southeast more or less parellel with the Rio Grande River to the vicinity of the Aldamas,

See Special Insert Map

Nuevo Leon—Tamaulipas

Nuevo Leon. Then it swings sharply to the southwest, continuing in that direction for about 15 miles, to Los Herreras, at which point it turns back and again follows a southeasterly trend. The terrace finally disappears to the southwest of the town of China. Along the northern extremity of the terrace, west of Laredo, the formations dip eastward at angles of five to 20 degrees, and similar steep dips are found along the southern portion of the terrace, notably in the district immediately west of Roma, Texas. This great terrace looms up promiscuously on pictorial maps made through aerial photography. The name which has been given to it is taken from the fact that it extends from the vicinity of the town of Escalera, Nuevo Leon, on the north through the vicinity of Aldamas on the south.

In general the Escalera-Aldamas Terrace is parallel with the front of the Sierra Madre Mountain range. Between the terrace and the Sierra Madre front, and running parallel with them, is a smaller mountain range, including the above named Lampazos, Vallecillos, Picachos, and Papagayos, all but the latter being important as sites of lead and silver mining. Between this group of mountains and the Escalera-Aldamas Terrace is an extensive folded and faulted zone, six to eight miles wide for the most part and nearly 75 miles long, extending southwesterly from a district immediately west of the town of Paras, Nuevo Leon. In the region of Los Herreras, Nuevo Leon, its eastern boundary practically converges with the Escalera-Aldamas Terrace, and it extends on beyond the southern limits of the Papagayos Mountains.

Structures Along Escalera-Aldamas Terrace

On top of or immediately adjacent to the Escalera-Aldamas Terrace are located some of the best known structures of Northern Mexico. In the order of their location from northernmost to southernmost, they are as follows: a great plunging anticline or "nose," immediately southwest of Laredo and due west of the Mirando district fields of Texas, known as the "Salado Arch;" the Barreta (or Tanque-Barreta) structure, a few miles southeast of the above anticline; La Lajilla, at the junction of the Rio Salado and the Rio Sabinas; Guerrero dome and Ojo de Agua dome, west of that part of the Rio Grande between Zapata and Roma, Texas; and finally North Aldamas and South Aldamas, separated by the Monterrey-Matamoros branch of the National Railways of Mexico. Those various structures, showing up definitely and positively at the surface, will now be discussed individually.

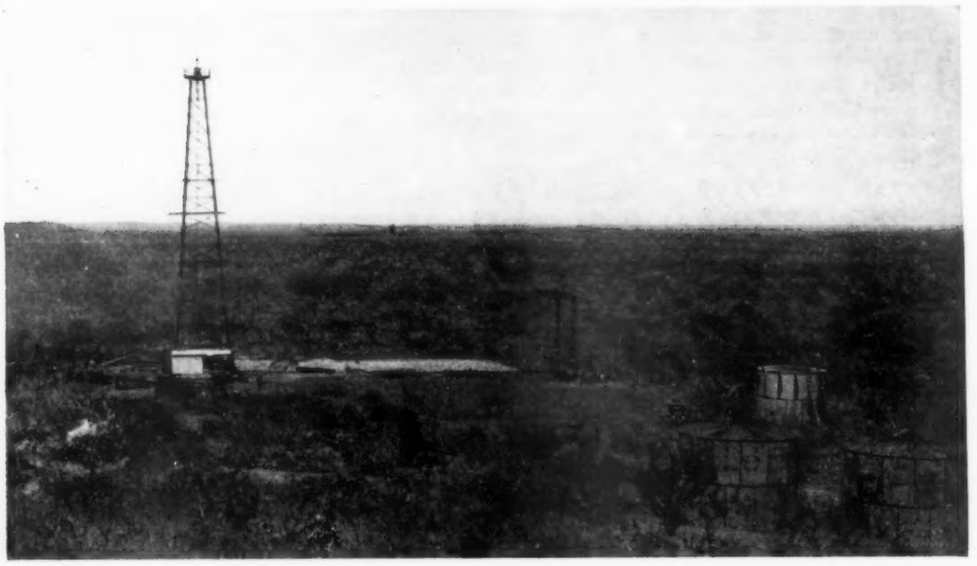
"Salado Arch"

The great anticline referred to above as the "Salado Arch" was so named by Richard A. Jones, geologist, because of its proximity to the Salado River. Mr. Jones first described the structure briefly in an article entitled "Northern Mexico Waiting for Testing,"[1] and he also described the same anticline in considerable detail in an interesting paper entitled, "A Reconnoissance Study of the Salado Arch, Nuevo Leon and Tampico, Mexico," which was published in Volume IX, Pages 123-144 of the Bulletin of the American Association of Petroleum Geologist's.[2] Mr. Jones did considerable work in Northern Mexico at that period, and he has been one of only a few writers on the region. In the two papers mentioned above, incidentally, he also gave general information on the Tanque-Barreta, La Lajilla, Guerrero, and Aldamas structures.

Evidence of the existence of the anticline which has been called the "Salado Arch" (and which is outlined roughly on the accompanying map) is given through dips of the formations. The anticline plunges southeastward, the southeast end of it being in the immediate vicinity of the 27 degree latitude line, a few miles west of San Ignacio, Tamaulipas. The anti-

[1] THE OIL WEEKLY, January 30, 1925.
[2] THE OIL WEEKLY, July 10, 1925.

Scenery of particular beauty is found in the mountains lying between Laredo and Monterrey, along the new paved highway between those cities.



Compania Petrolera Tamaulipas, S. A., Guerrero 3, Guerrero Dome, Tamaulipas.

cline extends northwest at least bebond the Nuevo Leon state line into Coahuila a distance of over 60 miles, its axis in the Nuevo Leon portion, south of the Laredo-Monterrey railroad, lying between two parallel escarpments. Those northwest-southeast trending escarpments are about eight miles apart, their southeastern limit being west of San Ignacio. That on the east, a prominent southwest facing escarpment, known to the inhabitants of the area as the "Ceja Grande," extends northwest into Coahuila. Along that portion of it in Northern Nuevo Leon it reveals formations dipping sharply to the northeast at angles of five to 30 degrees. That northeast dip of sediments continues along the Ceja Grande from northernmost Nuevo Leon to the vicinity of San Ignacio. But in that general area, north of the village Las Tortillas, the general dip changes to southeast. Still farther to the northwest is the other escarpment, the "Ceja Chica," less prominent than the Ceja Grande, facing toward the northeast, or toward Ceja Grande, and showing southwest dips in the formations, ranging from one to three degrees. The Ceja Chica extends northwesterly parallel with Ceja Grande, but dies out in the vicinity of the Laredo-Monterrey railroad. The above dips, swinging from northeast along the Ceja Grande to southeast near Las Tortillas to southwest long the Ceja Chica, constitute the evidence pointed out by Mr. Jones as indicating a plunging anticline. Similarly, there is evidence of a syncline to the west between the Ceja Chica and the Salado River, he stated, northeast dips being in evidence along the river and on a southwest-facing scarp just east of the river, in contrast with the southwest dip in the scarp of the Ceja Chica.

While the Ceja Grande, the large escarpment on the east, is of Eocene sediments, the west portion of the structure has upper Cretaceous formation (Papagoyas shale) at the surface, the contact being near the base of the Ceja Grande.

The above described great anticline, over 60 miles long and about one-fourth as wide, is probably of too great magnitude to be regarded in that form as a prospective oil field, but there is the possibility of local domes or faulting on it, which might provide the necessary conditions for oil accumulation. This area, unlike practically all other structures in Nuevo Leon and Tamaulipas, has the Cretaceous at the surface, and since there are no great thicknesses of Eocene to drill through, there is greater possibility here of reaching and testing out the lower Cretaceous limestones (including the Tamasopa limestone) which have furnished the prolific production of the fields west and south of Tampico.

The oil development rights on the land covering the above great anticline at the north end of the Escalera-Aldamas Terrace are divided among more than half a dozen companies, including Compania de Petroleo Mercedes (Mercedes Petroleum Company—subsidiary of Standard Oil Company of New Jersey), Mexican Gulf Oil Company, Continental Oil Company of Mexico, Compania Petrolera Tamaulipas (Tamaulipas Oil Company—affiliated with Humble Oil & Refining Company), the Buckleys interests, and Huasteca Petroleum Company (an indirect subsidiary of Standard Oil Company of Indiana). The development rights along the right-of-way of the National Railways of Mexico line are held by the Control de Administracion del Petroleo Nacionales (Administrative Control of National Petroleum), a company controlled and more than 50 per cent owned by the federal government of Mexico. The "Control" has drilled the only test yet put down in the above discussed territory. Its well, located near the station of Camaron, on the north end of the Escalera Anticline, was a recent test, drilled during 1930. It had Papagayos shale (Cretaceous) at the surface, and in blue shale, also probably Papagayos, at 2110 feet, it encountered showings of both oil and gas. It was drilled to 4506 feet, and has been reported temporarily abandoned in a lime at that depth. Nevertheless, the showing in the well makes the north end of the Escalera-Aldamas Terrace look promising. The Papagayos (or Mendez) formation, is in the upper Cretaceous and it has yielded some commercial oil production in the Ebano field, northwest of Tampico.

La Laja Anticline

About 30 miles west of the Camaron well, and just west of the Salado River at the locality where it flows out of Coahuila into Nuevo Leon, is the La Laja anticline, which should probably be mentioned at this point, while discussing northern Nuevo Leon. It is a small, anticlinal mountain, controlled by the Richmond Petroleum Company (Standard Oil Company of California).

Tanque-Barreta

After the digression to mention La Laja, we return again to the Escalera-Aldamas Terrace, to proceed with discussion of the structures along it to the south. First is Barreta or

Tanque-Barreta, a complex fold a few miles west of San Ignacio.

La Lajilla

Approximately 10 miles south and slightly west of Barreta, in the southward-opening fork formed by the junction of the Sabinas River with the Salado River, approximately 12 miles west of Zapata, Texas, is the structure known as La Lajilla, after a ranch of that name. The structure, said to be principally faulting, is about six miles long. It trends parallel with the Sabinas River and is on the east side of that stream. The surface is characterized by rugged, sandstone-capped hills. No drilling has yet been done here, and although a discouraging deep test has been drilled on the Guerrero structure about 10 miles southeast of here, that well has little bearing on the prospects of La Lajilla. For La Lajilla is almost at the Eocene-Cretaceous contact, and a well drilled on it would have only a small thickness of Eocene to drill through. (It is an abnormally great thickness of Midway, the lowermost formation of the Eocene, which has in a measure condemned the Guerrero structure). Operating concessions covering La Lajilla are held by Compania Petrolera Tamaulipas (Humble Oil & Refining Company affiliation.)

Hauling material to Mexico's deepest test, Guerrero 3 of Campania Petrolera Tamaulipas, on Guerrero Dome.

Guerrero Dome

The Guerrero Anticline or Guerrero Dome is about midway between Guerrero, Tamaulipas and Paras, Nuevo Leon. It lies principally in Tamaulipas, but part of the south end is in Nuevo Leon. The anticline trends almost due north and south, the north end of it being about seven miles south and slightly west of the town of Guerrero. The structure is about three miles wide and eight miles long. Approaching the ideal fold in symmetry and detail, it is spoken of as "the geologist's dream," expressing itself in a narrow, eroded, anticlinal valley, bordered by sandstone-capped hills whose formations dip in opposite directions on opposing sides of the valley.

Detailed study has shown that the fold is actually an oblong anticline or structural dome of the Rocky Mountain type, resembling for example Teapot Dome, and that there are in reality two domes at the top of the anticline, separated symmetrically by a central saddle. The north dome is largely in the San Francisco Grant and the south dome is for the most part in the Soldadito Grant.

Concessions covering the structure are held by Campania Petrolera Tamaulipas, and a deep test, Guerrero 3, the deepest ever drilled in all Mexico, is being put down on the Soldadito Grant, its location being at about the crest of the south dome.

It started in Wilcox sand of the Eocene, that surface sand being considered as the Carrizo part of the Wilcox, hit the top of the Midway (lowermost Eocene) formation at 2287 feet, and was still drilling in Midway at 6959 feet recently. That thickness of Midway—over 4600 feet—is a surprise to the owners of the test as it probably will be to many geologists in Texas, and it actually represents a thickening of that formation over Guerrero dome as compared with measured sections near the dome. The Midway, however, is fossiliferous and readily identified, and surface measurements of it between the Rio Grande and Tampico indicate some enormous thicknesses of the formation.

The Papagayos shales of the upper Cretaceous are to be expected upon passing out of the Midway, and surface measurements indicate that the Papagayos would have a thickness of about 3000 feet. No oil or gas showings have been found in Guerrero 3, and the shallowest possible production on the south dome, at least from the standpoint of wells located on top of the structure, would be around 7000 feet—provided the upper portion of the Papagayos should bear oil—and that would prove profitable only in the event enormous production should be developed. As a matter of fact the principal prolific production of Mexico in the Tampico districts was not from uppermost Upper Cretaceous, but from Lower Cretaceous, which apparently would be too deep at Guerrero to attempt to reach, at least under present-day conditions. The only practical hopes, and they are not strong ones, which the Guerrero anticline seems to offer at present are for production from the flanks of the south dome, or from some portion of the north dome.[2]

Ojo de Agua

Farther south on the Escalera-Aldamas Terrace, about six miles from the Guerrero anticline, is a similar dome, Ojo de Agua, controlled by Continental Oil Company of Mexico and Compania de Petroleo Mercedes, but as yet undrilled. It is

[2] A special article has been prepared on the deep Guerrero dome test, and it will be presented in a forthcoming issue as an installment in the present series of articles in The Oil Weekly on Northern Mexico.

MEASURED SECTION NEAR ALDAMAS, NUEVO LEON

(Together with descriptions and remarks as to oil-bearing possibility).

Eocene —

Formation	Thickness in feet	Remarks
Fayette	2300	Sand and sandy shale; furnishes much of Mirando-Laredo district production.
Yegua	1800	Mostly shale, but some sand, which might produce.
Cook Mountain	1700	Sand and shale. Is productive on Roma, Texas, structure along Rio Grande, and at Ochoa or Pescada structure, Tamaulipas.
Mt. Selman	400	Mostly clay; some sand, which might produce.
Carrizo	300	Sandstone; might produce under proper conditions.
Indio	1600	Sands and shales; could produce; very fossiliferous.
Midway	1500	Mostly clay, but also some sands which might produce.
Upper Cretaceous	4000	Mostly clay, basal part limestones, corresponding to Eagleford, and might produce.
Lower Cretaceous	..	Limestones which have furnished prolific production in Mexico.

* * * *

Further Classifications of Upper and Lower Cretaceous

UPPER CRETACEOUS

Formation in Mexico	Texas Equivalent
Velasco	Navarro
Papagayos (or Mendez)	Taylor and part of Austin
San Felipe	Part of Austin and Eagleford

LOWER CRETACEOUS

Tamasopa (or Tamaulipas) — (Buda and Del Rio disappear shortly west of the Rio Grande probably becoming upper Tamasopa.)

* * * *

(In his generalized section of the Mexican Cretaceous, Earl A. Trager in the A. A. P. G. Bulletin, Volume 10, Number 7, showed the following thicknesses, approximately: Velasco 950-1100 feet; Mendez 1000 feet; San Felipe 800 feet; Tamaulipas 1200 feet, each figure qualified by a "plus or minus" sign. Tamaulipas (or Tamasopa) was shown as the equivalent of Washita, Fredericksburg, and Trinity.)

six miles due west of Parras, Nuevo Leon, lying west of the Alamo River. Its trend is slightly west of north, the northwest extremity being in Nuevo Leon, but the remaining larger portion of the structure lying in Tamaulipas. It is a slightly smaller anticline than Guerrero, and the surface formation is the Indio part of the Wilcox sand, which is immediately below the Carrizo, the formation at the surface at Guerrero dome.

North Aldamas and South Aldamas

South and somewhat east of Ojo de Agua at a distance of about 25 miles, is the north end of the North Aldamas Anticline, and four or five miles still farther south is the South Aldamas Anticline, the former lying north of the Escalera-Aldamas Terrace, and the latter south of that terrace, both in Nuevo Leon. They are separated also by the Monterrey-Matamoros branch of the Mexican National Railways. Both structures have the same trend, northwest-southeast, and formerly were regarded as opposite ends of the same anticline, which was described as the Aldamas Anticline, with total length of about 20 miles. Now, however, they are regarded as separate structures, separated by an interval of about four miles. These structures lie a few miles west of the railroad station of Aldamas. The surface formation on these structures is the Midway. The Aldamas Anticline was one of the earlier known structures of Northern Mexico, and concessions covering the area are divided among various operators, including Petroleum Maatschappy, "La Corona," (Royal Dutch-Shell interests), Compania de Petroleo Mercedes, Huasteca Petroleum Company, Ohio Mexico Oil Corporation (carrying an interest in the Corona holdings), Munoz & Martinez, Continental Oil Company of Mexico, Compania Imperio de Gas y Oleo Ducto (affiliated with the Empire companies, Henry L. Doherty interests), Mexican Sinclair Petroleum Corporation, and others, the three last named being interested to lesser extent than others named.

In contrast with some of the above structures, the Aldamas area has had several wells drilled on it, and other tests are in progress now. On the east flank of North Aldamas Anticline Coursen & Matches drilled a well in 1925 which was too shallow to be of practical importance, but now Ohio Mexico Oil Corporation is drilling a well which may prove of interest, although it was recently reported in difficulty, with total depth of 2500 feet but with a sidetrack job necessary because of parted casing.

On the South Aldamas Anticline there have been two wells, one of which is temporarily shut down at 2000 feet. The first of the two, Ferronales 205 of the Control de Administracion del Petroleo Nacionales, was located on the railroad right-of-way at the north end of the anticline, and it had no showings. It was abandoned in 1930 at 1502 feet, following mechanical difficulties. The other well, located on the south end of the anticline, is Frick et al's Santa Monica No. 1, shut down at 2000 feet. Oil and gas showings were reported from 1200 feet down. These showings are encouraging not only for the South Aldamas and North Aldamas structures, but also for China and Banquete, two smaller structures immediately southeast of South Aldamas.

It is between North Aldamas and South Aldamas that the Escalera-Aldamas Terrace makes the above noted sharp southwesterly swing, continuing in that direction to the railroad station of Los Herreras and then swinging back again into a southeasterly trend and finally dying out southwest of China. Acreage along the terrace south of Aldamas is held principally by Continental Oil Company, Compania de Petroleo Mercedes, and Mexican Gulf Oil Company.

Those companies, and a few others, including Munoz & Martinez (engineers and independent oil operators with headquarters in Monterrey) also have the concessions covering most of the great faulted and folded zone mentioned previously and shown on an accompanying map. Within that zone, however, there has not been any drilling aside from a well which is being drilled at present by Compania de Petroleo Mercedes. That test, Chapa No. 1, was drilling in early November, 1930, around 1550 feet in Midway, the same formation in which it started. Its location is about eight miles north and slightly east of Cerralvo, and about five miles west of General Trevino.

Seven Structures in Eastern Nuevo Leon

Eastward and southward from the above faulted and folded zone, between it and the eastern boundary of the State of Nuevo Leon, there are seven structures, all but one controlled by Continental Oil Company of Mexico. They include China and Banquete, small structures immediately east of the faulted and folded zone; Vaqueria Anticline, about 25 miles south of China structure, near the Cretaceous-Eocene contact; Zacate Anticline, a large structure, now the scene of a core drilling campaign, east of China and Banquete; Guayacan, another small structure, south of Zacate; and Puerto Rosa and Puerto Trevino, small and large structures, respectively, lying along the Nuevo Leon state line east of Zacate. The two latter structures have Oligocene formation at the surface, while the other five are all within an area with Eocene outcropping. All of these seven structures with the exception of Vaqueria are controlled by Continental Oil Company of Mexico. Vaqueria is held by Mexican Gulf Oil Company.

Zacate Anticline

The Zacate structure is so called after the railroad station of that name about mid-way between Monterrey and Matamoros on the lines of the National Railways of Mexico. The north end of the structure is about 12 miles southeast of Zacate and 25 miles south of Rio Grande City, Texas. The structure is narrow but about 25 miles long, with 1500 feet of

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closure. In contrast with the general northwesterly trend of most of the structures in Nuevo Leon and Tamaulipas, Zacate trends north 30 degrees east. The north end of the Tamaulipas Mountains extends to a point 65 miles due south of the Zacate anticline, and the structure is apparently controlled by that Sierra Tamaulipas uplift. Featured by a fault on the east side of about 5000 feet of throw, the structure is regarded as probably a fault along the edge of a buried Cretaceous arch.

That arch, extending on southward, manifests itself at the surface where the Tamaulipas Mountains rise above the surrounding country. Thence it continues on southward for many miles. The Tamaulipas range extends to the vicinity of the Panuco district oil fields. There it dies out, but it is believed that the above mentioned arch merely dips down for an interval, rising up again not many miles farther south, and continuing on beyond the famous and prolific South Fields. Thus the arch which controls the Zacate structure is related on the south to the oil production of the Panuco district and also to the more prolific pay of the marvelous South Fields. At Panuco the oil accumulated in fractures and crevices in nonporous Tamasopa limestone which is of Lower Cretaceous age. The South Fields, located south of the Panuco district, are along a west-facing fault scarp off the east edge of the above discussed arch, and the production is from porous Lower Cretaceous coral limestone which is probably the same age as the producing lime at Panuco. For west of Panuco and on the west side of the Tamaulipas arch there is a low range of mountains, the Boca del Abra, built of coral limestone; and on an east facing scarp in those mountains there is coral limestone with asphalt in its pores, indicating former presence of oil. Producing depths at both Panuco and the South Fields have been around 2000 feet.

Like Zacate, some of the nearby smaller structures, Guyacan, Puerto Rosa, and Puerto Trevino, as well as the Vaqueria Anticline, farther south, are also probably related to the above discussed buried Cretaceous arch.

The territory east of Zacate structure has been worked with seismograph during the past year, and eastward from the structure, almost to the coast Compania de Petroleo Mercedes and the Empire interests have checkerboarded 10,000-acre blocks.

On Zacate Anticline, Continental Oil Company of Mexico has in progress a core drilling campaign, using two diamond drills. As stated previously, the company controls all this structure as well as five others in adjacent territory. Early in November a 1000-foot well had been completed, all drilling having been in the Cook Mountain formation, which has come up through the Yegua and Fayette. Core drilling will probably be continued for several years, but in the meantime some deep tests may also be drilled. Surface work gave general information on the structure, but it is hoped that through the core drilling local highs may be found. Continental Oil Company hopes for production at Zacate from any sand covered with cap, possibly in lower Cook Mountain or in the Mt. Selman. Its big hope, of course, is for production from the Lower Cretaceous, which so richly rewarded the operators in the fields west and south of Tampico—a hope which might be realized if some of the usual sands are cut out or thinned.

Continental Oil Company of Mexico is the largest concession holder in Nuevo Leon. In Northern Mexico it has a total of 970,000 acres, most of which is in Nuevo Leon.

In connection with the work which it is doing at Zacate, Continental Oil Company has built a graded road, over 15 miles long, from the railroad station of Zacate to a point near the center of the anticline, where the company's road opens into the Monterrey-Matamoros highway which is under construction.

Approximate Acreage Held by Larger Concessionaries in Nuevo Leon and Tamaulipas

(See text in discussion of various structures for information as to American affiliations of companies and regarding holdings on those structures.)

Continental Oil Company of Mexico: 1,000,000 *acres in Nuevo Leon and Tamaulipas, most of it being in Nuevo Leon.*

Mexican affiliations of the Empire or Henry L. Doherty interests: 1,500,000 *acres in Central Tamaulipas, and additional holdings in Northern Tamaulipas and Nuevo Leon.*

Mexican Sinclair Petroleum Corporation: 750,000 *acres in Tamaulipas and some acreage in Nuevo Leon, including small holdings around Aldamas.*

Compania de Petroleo Mercedes: 675,000 *acres in Nuevo Leon and Tamaulipas.*

Mexican Gulf Oil Company: 500,000 *acres in Nuevo Leon and Northern Tamaulipas.*

Munoz & Martinez: 200,000 *acres in Nuevo Leon.*

Richmond Petroleum Company: 70,000 *acres in Nuevo Leon, principally.*

Huasteca Petroleum Company: 50,000 *acres, principally in Nuevo Leon.*

Compania Petrolera Tamaulipas: 50,000 *acres in Tamaulipas.*

Ohio Mexico Oil Corporation: 25,000 *acres in Tamaulipas, near Mier.*

The "Corona" (Shell) Company: 15,000 *acres in Nuevo Leon.*

Ochoa or Pescado Structure

Twelve miles due north of Zacate anticline is the Ochoa (or Pescado) structure in the State of Tamaulipas. It lies immediately north of the station of Ochoa on the Monterrey-Matamoros branch of the National Railways of Mexico, and the San Juan River crosses it near its southern end. This structure was formerly considered by some as a continuation of the Roma structure, which lies partially in Texas and partially in Mexico. But they are now recognized as individual structures, both trending west of north, and each being a little over eight miles long. They are separated by an interval of about four miles.

The Ochoa structure has been the scene of some interesting drilling, and to one well there, out of all drilled in the Tamaulipas-Nuevo Leon territory, goes the distinction of most nearly approaching the status of a commercial oil producer. That well, Nacionales 201, drilled in 1927, by Control de Administracion del Petroleo Nacionales on the south bank of San Juan River, started in Fayette formation and was drilled to 3605 feet, where from lower Cook Mountain or upper Mt. Selman it produced some 40.5 gravity oil on drill stem test. The hole was damaged when pipe was dropped in it, and the well was never completed successfully, but it is still slushing over, yielding some oil. Details concerning this test appear in the accompanying list of wells.

The "Control" is now drilling a second well in this area, Ferronales 206, on the railroad right-of-way near Ochoa station, and early in November, it had reached the depth of 600 feet. This test is on the southeast edge of the structure, possibly too far out for success. (See accompanying list of wells for details.)

There has also been another well drilled on the Ochoa structure, San Juan 1, of San Juan Drilling Company. Located 300 feet northeast of Nacionales 201 of the "Control," it showed gas in sand at 3546-3580 feet, and is standing at 3751 feet.

Compania de Petroleo Mercedes holds concessions covering most of the Ochoa structure, exceptions being the government controlled land along San Juan River and the railroad right-of-way, and also certain other lands, although of no great extent, controlled by the government.

The drilling done by San Juan Drilling Company was on the government property, the company having obtained its rights under a contract with the Control de Administracion del Petroleo Nacionales.

(Continued on page 38)

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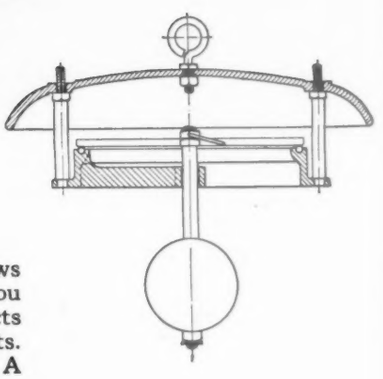

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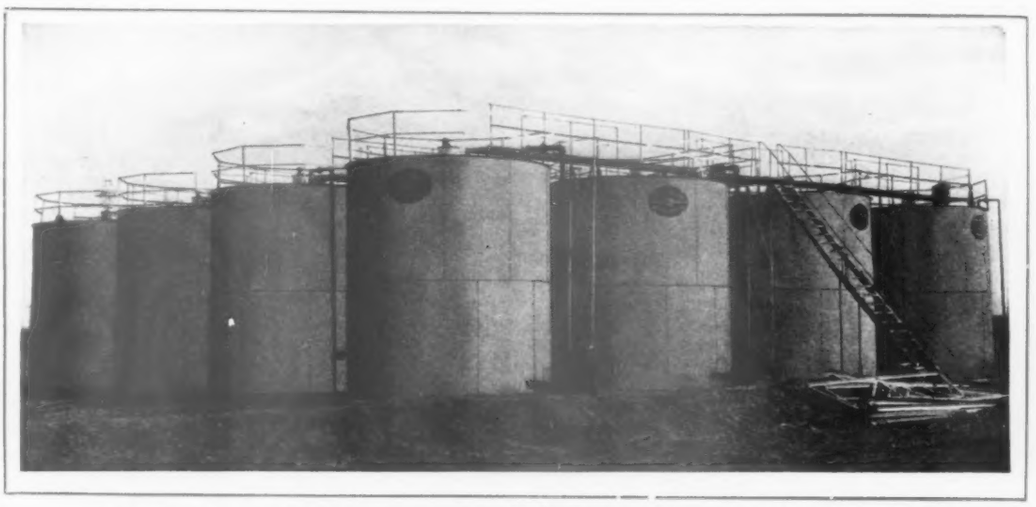

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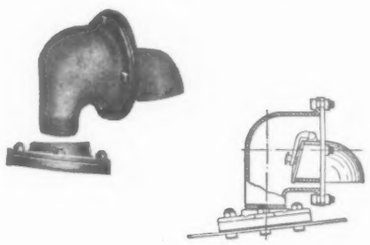

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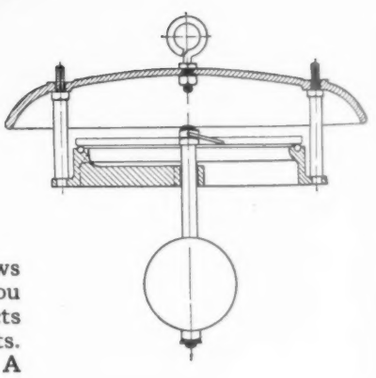

Fast Erection Service

If you want unusual speed in Tank erection—Parkersburg Tank Setting Crews are always in readiness in the active fields, to give you efficient service when you want it. Parkersburg is the only manufacturer of Tanks that distributes and erects its own Tanks in all principal fields in the Mid-Continent and Gulf Coast Districts. Uniform quality and dependable service, stocks, erection, crews . . . action! A telephone call to our nearest Branch will bring this complete service to you.

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THE PARKERSBURG RIG AND REEL CO.
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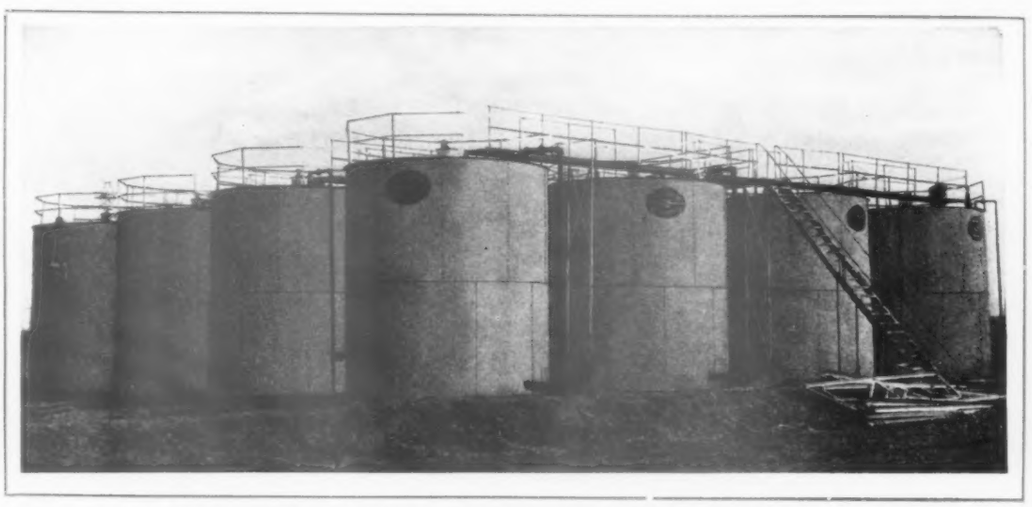
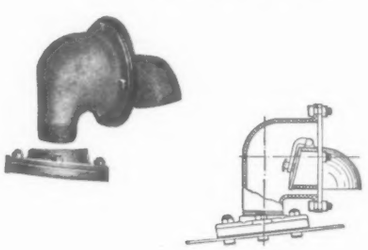


Battery of sixteen 500-bbl. Parkersburg Gas-Tight Tanks at Hempstead, Texas. These Tanks are equipped with the most improved type of vapor pressure fittings. Notice the Steel Stairways, Runways and Guard Rails—all of Parkersburg manufacture.

Vacuum Valve with Swing Check



Parkersburg Vapor Pressure Valves

The efficient, automatic operation of Parkersburg Vapor Pressure Valves, often referred to as "vapor pressure fittings," maintains a pressure in Parkersburg Tanks and prevents the escape of valuable vapors.

The Pressure Release Valve is designed to fit the manhole dome and retain pressure up to 16 ounces, which reduces breathing and saves the light ends of the crude.

The Vacuum Valve with Swing Check is designed to permit entrance of air as required to take care of temperature changes, or to relieve any created vacuum when the tank is run to the pipe line. Can be supplied for either 2 or 4 inch openings.

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Branches In All Active Fields

Eight miles east and slightly south of Ochoa, in an area where there is probably east-west faulting, a wildcat was drilled by Compania Fronteriza de Petroleo on the Santa Anita ranch. It reached total depth of 3474 feet without encountering showings of oil or gas and was then abandoned. (See accompanying well list for details.)

Roma Structure

The Roma structure, referred to above, has not been tested on the Mexican side of the Rio Grande, although at least 50 per cent of the anticline is regarded as lying in Mexico. Like the Ochoa structure, the Mexican portion of the Roma anticline is controlled by Compania de Petroleo Mercedes.

Although the Mexican part of the structure is still untested, the Texas portion, in Starr County, is controlled largely by The Texas Company, and that concern is now drilling its seventh test there, while past operations have resulted in completion of one producing oil well. That discovery well, The Texas Company's Virginia Guerra 4-A, Share 305, Porcion 76, Starr County, about seven miles from Roma, Texas, was first bailed in about November 20, 1929, flowed at the rate of 30 barrels daily by heads for a while, and was subsequently put on the beam. It is still pumping around 25 barrels daily, nearly as much as when it was first placed on production. The oil tests 34 gravity, and it is from either the lower portion of the Cook Mountain formation or from the Mt. Selman, at total depth of 3590 feet. Screen was set in the producing sand after 6⅝-inch casing had been cemented over the sand at 3560 feet. At the surface there is a 300 to 400-foot thickness of Fayette formation. Location of the discovery well is on the west edge of the surface structure, along the northern end of the anticline. Virginia Guerra 5-A, located about one-half mile southeast of the discovery well, and also on the west flank of the structure recently encountered the same sand which was found in the producer, but failed to develop oil production. At total depth of 3656 feet, a little deeper into the sand than No. 4-A was, and the sand also being slightly deeper, the well showed 5,000,000 cubic feet of gas and 500 feet of salt water, and then, about November 15, 1930, it was decided to drill deeper. Aside from the above two wells, The Texas Company has drilled five other tests on the Roma structure. They were located on top of the structure and on the south end of the Texas portion of it, and they were classed as dry holes, although showings of gas were encountered in the sand from which oil production was developed in Virginia Guerra 4-A.

Continental Oil Company of Mexico has most of the acreage between the Ochoa and Roma structure holdings of Compania de Petroleo Mercedes, its concessions in that intermediate territory aggregating 10,000 acres.

Ohio Mexico Oil Corporation also has extensive properties in this section of Tamaulipas. A few miles outh and west of the Mexican portion of Roma structure Ohio Mexico Oil Corporation has a concession covering the Mier structure, which is shown on the accompanying map; and the company plans to start a well there in the immediate future, it is reported. The concession taking in the structure is five miles square (16,000 acres), extending from a point three miles south of Mier, Tamaulipas, to a point eight miles south of Mier. The same company also has another concession of about the same size five miles to the north of Mier and extending northwest from that town, and may have a structure in that area.

History of Concessions Near Rio Grande

The first active leasing of the district was that done in 1920 around Aldamas by Miller, Ferguson & Small, financed by Ed Barron. E. K. Breen did leasing for those men and also worked independently later. That was followed by the activity of Jones and Buchanan, in the Guerrerro anticline area. Their interests were later taken over by Earl Bateman and James Taylor, who subsequently turned their holdings to the Humble and Empire interests. The Empire still has a half interest in some of the Guerrero acreage.

In the vicinity of the town of Mier a great expanse of land was leased originally about the year 1900 by Compania Carbonifera de Mier, primarily for coal and iron mining rights. After the federal petroleum law of 1925 was passed, this company perfected its lease, which, according to provision of the new law, gave it the right to obtain a concession covering the land. In the meantime Compania de Petroleo Mercedes obtained an option on the holdings of the coal company, and it exercised its option on about 100,000 acres, including lands covering the Ochoa and Roma structures. The coal company also sold the previously mentioned 10,000 acres between Ochoa and Roma to Continental Oil Company of Mexico, and turned the above discussed Mier acreage to Ohio Mexico Oil Corporation.

Gas Line to Monterrey

As shown on the accompanying map, there is an established natural gas line traversing Tamaulipas and Nuevo Leon, carrying gas from the Jennings field, Zapata County, Texas, to industrial and domestic consumers in Monterrey. The line actually crosses the Roma structure, and it passes within a few miles of various other structures. Gas from it might be used for fuel in development work on the Mexican structures; and should any of those structures yield natural gas in commercial quantity this gas line would provide them a market outlet, for the line was built under the condition that its supply of gas would be taken from Mexican fields if possible. The line is the property of Compania Mexicana de Gas, S. A. (an affiliation of the United Gas Company). It is of 13¾-inch pipe. The distance from Monterrey to the Rio Grande is 96 miles, while from the river to Jennings, Texas, is 47 miles. Commercial deliveries of gas were started about December 15, 1929, at the approximate rate of 18,000,000 cubic feet per day on the basis of contracts already made, with expectations of increasing runs to 21,000,000 feet daily, the capacity of the line. With addition of a compressor station the capacity can be increased above 30,000,000 cubic feet per day, it is said. The line serves several small towns adjacent to it as well as Monterrey, which is called the "Pittsburgh of Mexico," by reason of its rank as a leading commercial and industrial city of the republic. Monterrey has an estimated population of 135,000 persons, and it would also offer a considerable market for oil which might be produced on the the above structures, most of them within 100 miles of the city.

Climate and Accessibility

Favorable climate and accessibility constitute other noteworthy advantages offered the oil operator by the Tamaulipas-Nuevo Leon territory. Being about like that of the adjacent border region of Southwest Texas, the climate is healthful and pleasant. The winters are mild, and although the summer days are hot, the nights always bring the relief of cooling breezes.

Roads and Railroads

Transportation of materials to some of the drilling sites will entail some difficulties, particularly during rainy periods, but they will be no greater than those encountered in many virgin territories in the United States. Nearly all of the Tamaulipas-Nuevo Leon structures are within 25 miles of the Rio Grande, and eight are within 10 miles. Materials moved in by truck from the United States can be carried across the river conveniently over bridges at Laredo, Zapata, Roma, Rio Grande City, or Reynosa, a large per-

The

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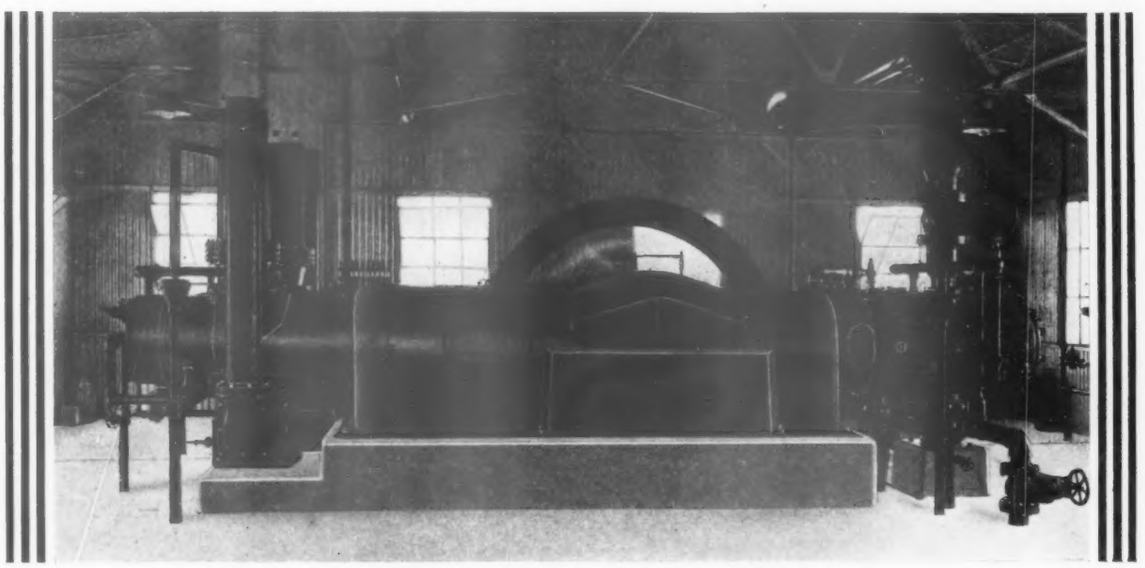
New Type Power Cylinder



Operators have been quick to see advantages in the new power cylinders with which CLARK Super 2-Cycle Engines can now be furnished. The inverted exhaust feature permits obvious economies in exhaust lines, water cooling, etc. Whenever better engines *can* be built, CLARK *builds them!*

Shown above is 200 H. P. CLARK Super 2-Cycle Compressor used in vapor recovery work by Anderson Prichard Refining Co., Cyrill, Oklahoma.

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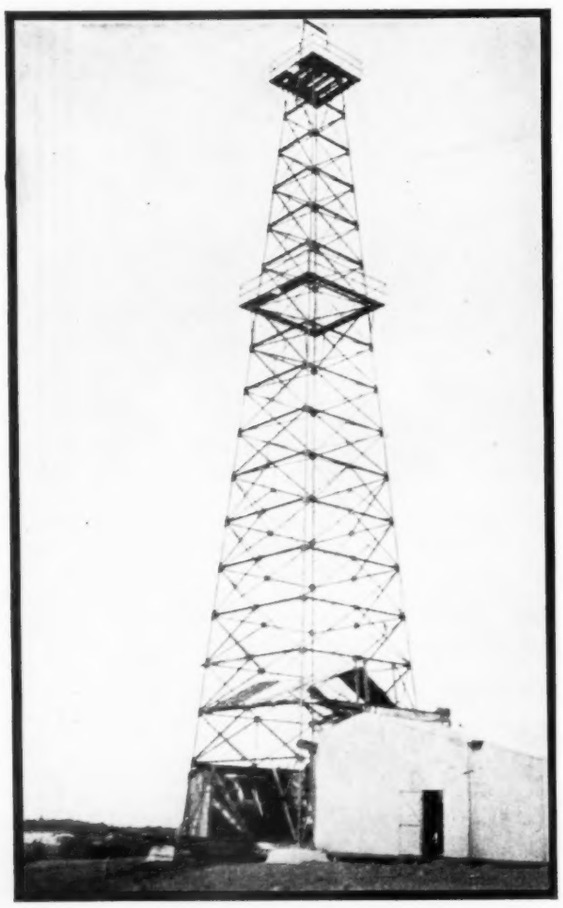
56 out of 61 Sinclair

Oil and Gas Co. Wells in Oklahoma City Field Drilled with 12 x 12 IDEAL-AJAX Roller Bearing Piston Valve Engines.....



For this one: Actual Drilling Time, 36 days.

Total number of wells drilled for Sinclair Oil & Gas Co. in the Oklahoma City Oil Field **—61**

Number of wells drilled for Sinclair Oil & Gas Company in Oklahoma City Field with Ideal Ajax Roller Bearing Piston Valve Engines—**56**

Average depth of 61 wells to casing point. **—6500 ft.**

Average drilling days for 61 wells **—67 days**

Ask the National Supply Man for details and records in other fields.

FOR over half a century Ajax has been the pioneer in the leading oil fields of the world . . . constantly improving and changing engine design to meet increased demands for deeper drilling and speed.

The latest IDEAL-AJAX Roller Bearing Piston Valve Engine gives wonderful performance, especially with superheated steam where piston valves are absolutely essential.

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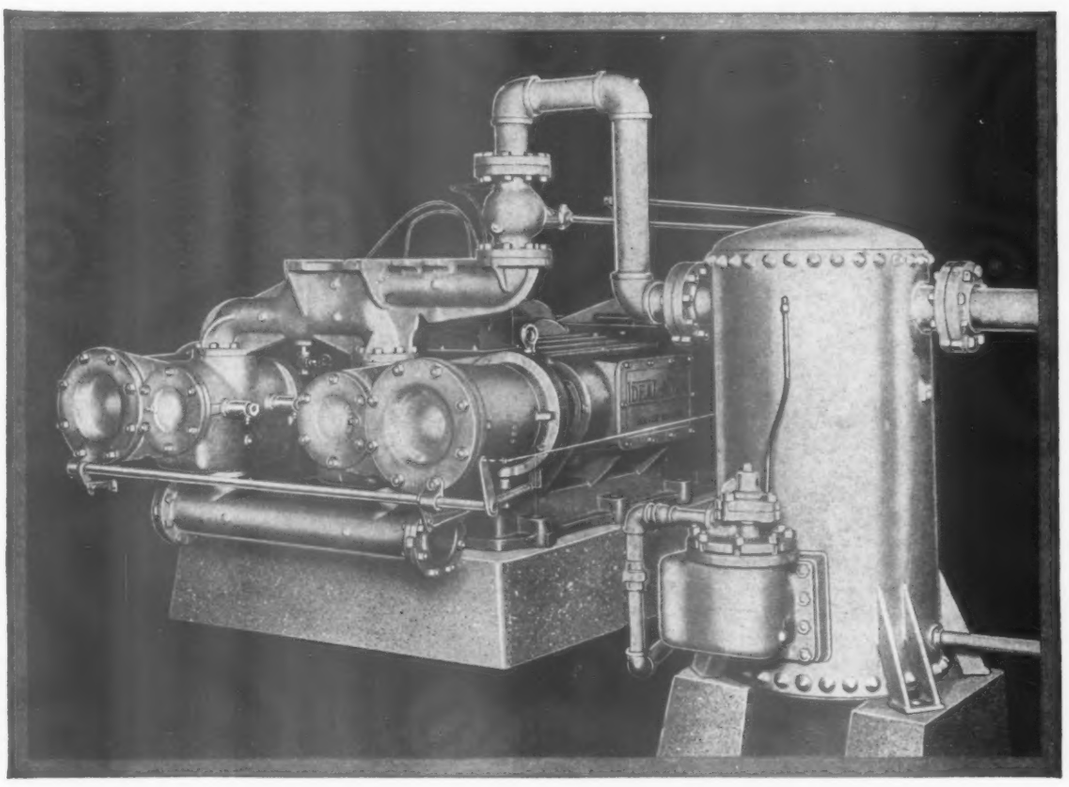
IDEAL-AJAX 12 x 12 Roller Bearing Piston Valve Engine with extra-heavy large - capacity Steam Separator.



centage of all the structures being within 15 miles of one or another of those bridges. The north end of the Escalera-Aldamas Terrace is traversed by both the railroad and the new paved highway leading from Laredo to Monterrey. That highway passes over the south end of the Salado Arch, and within 15 miles of the Tanque-Barreta and La Lajilla structures. Passing through the heart of prospective oil country also is the Monterrey-Matamoros branch of the National Railways of Mexico. It follows a course between the North and South Aldamas structures, actually crossing ends of the South Aldamas and Ochoa structures, and running within 25 miles of several others. Roughly parallel with this railroad line at a distance of about 15 miles to the south is the route of the National Highway which will extend from Monterrey to Reynosa and on to Matamoros. Grading has been completed on this road from Monterrey to Reynosa, and it has already been graveled a distance of 25 miles out of Monterrey, while the work of putting in bridges is in progress on to China. This road is to be a unit in a National Highway connecting the eastern and western coasts, extending from Matamoros through Monterrey, Saltillo, Torreon and on to Mazatlan on the Pacific.

Conclusion

As a final thought relative to the above discussed structures, it may be pointed out that they are now entering upon a period of greater drilling activity, and that even more drilling may be reasonably expected henceforth. For unlike the old producing areas of Mexico on which development had been started prior to the Constitution of 1917 and the enforcement petroleum law of 1925, which measures nationalized the oil resources of the republic, the prospective fields of Tamaulipas and Nuevo Leon are held mostly under "concessions," provided for in the new laws. Under those concessions all oil is the property of the government, although the owners of the land at the surface are entitled to reasonable rentals for use of the surface development operations and to five per cent of gross oil produced, by way of indemnity. The government participates in the profits from oil in the form of a production tax. Furthermore—and here is the point with which we are concerned at present—the concessions require the concessionaires to proceed with and to continue actual work, by obligating them to make certain designated expenditures on the properties involved. The first year the amount required is relatively small. The second year it increases in the ratio of 3 to 5, while the required expenditure per year beginning with the third year is 10 to 3 greater than for the first year. During the first one, two or three years the required development expenditure may be used in preliminary work, such as geological investigation, but thereafter about the only way to fulfill the expenditure requirement is in actual drilling of wells. The petroleum law went into effect on passage December 31, 1925, and the first concessions were granted after the opening of 1926, but there were delays in connection with actual switching to the new regulations, and it is only now that the concessionaires in Tamaulipas and Nuevo Leon are entering that period of post-preliminary work in which the maximum yearly expenditures will be required.

It must follow, therefore, that the next several years will bring more drilling in Northeastern Mexico than the region has ever witnessed before; and from the standpoint of both business and science this development will be of great interest. For oil operators and geologists have long reasoned that certain formations are producing oil in Southwest Texas in the absence of surface structures; and that those same formations should also produce—possibly in greater quantity—across the Rio Grande in Mexico, where prominent surface structures abound.

REFERENCES FOR ADDITIONAL READING ON NORTHERN MEXICO

Very little has been published heretofore on the geology or oil develcpment of Northern Mexico.

With special and detailed reference to structures of Nuevo Leon and Tamaulipas, Richard A. Jones, geologist, has published two articles, as follows:

(1). "Northern Mexico Waiting for Testing."—THE OIL WEEKLY January 30, 1925.

(2). "A Reconnaisance Study of the Salado Arch, Nuevo Leon and Tamaulipas, Mexico."—Published in the Bulletin of the American Association of Petroleum Geologists, Volume IX, Pages 123-144 (THE OIL WEEKLY July 10, 1925.)

The University of Texas Bulletin, Number 2748, 1927: "The Cretaceous and Tertiary of Southern Texas and Northern Mexico," by Bose and Cavins, is an extensive geological work on Northeastern Mexico. It is very valuable, although based primarily on paleontology.

Dumble was the first writer on Northeastern Mexico: E. T. Dumble, "Tertiary Deposits of Northeastern Mexico," California Academy Science, 1915.

On the Panuco District oil fields, west of Tampico, two papers have been published in the Bulletin of the American Association of Petroleum Geologists, as follows:

(1). Volume X, Number 7, page 667, July, 1926: "The Geologic History of the Panuco River Valley and its Relation to the Origin and Accumulation of Oil in Mexico," by Earl A. Trager.

(2). Volume XII, Number 4, page 395, April, 1928: "The Panuco Oil Field," by Charles Laurence Baker.

The federal government of Mexico exercises supervision over and keeps records of all wells drilled in the republic, and such information is incorporated into a monthly bulletin, "El Boletin del Petroleo," through the oil control offices at Mexico City. Aside from the bulletin, a further reference for government information is "Departmento de Petroleo de la Secretaria de Industria, Comercio y Trabajo" (Department of Petroleum of the Secretariat of Industry, Commerce and Labor), Mexico City.

MAPS OF NORTHEASTERN MEXICO

Munoz & Martinez, engineers whose address is Matamoros Oriente 505, Monterrey, Nuevo Leon, Mexico, several years ago completed compilation of an accurate and detailed land map of Northern Mexico, the scale being 1: 150,000. It covers the northern portions of Coahuila, Nuevo Leon and Tamaulipas, taking in territory between Piedras Negras, Coahuila, on the north, Monterrey on the southwest, Linares, Nuevo Leon, on the south, and Reynosa, Tamaulipas on the east. It extends across the Rio Grande, taking in part of the border country of Southwest Texas.

Rand McNally & Company published a series of maps in 1925 of the various Mexican states. They are in folder form, and each gives an index of the cities, towns, and ranches, with population statistics on places of over 1000 inhabitants. The maps show the major drainage systems, the railroads and the towns and ranches. The scale varies with each map, that for the northeastern states being approximately 1: 1,000,000, or around 15 miles to the inch. The map of Coahuila is in a folder by itself, but Nuevo Leon and Tamaulipas are combined in one map and one folder.

Another interesting map published by Rand McNally & Company is one of the whole republic of Mexico on a scale of 1: 4,750,000, showing states and territories, railroads, cities, towns, villages, rivers, lakes, islands and mountains, and carrying an index of that information.

View of the paved highway between Monterrey and Laredo

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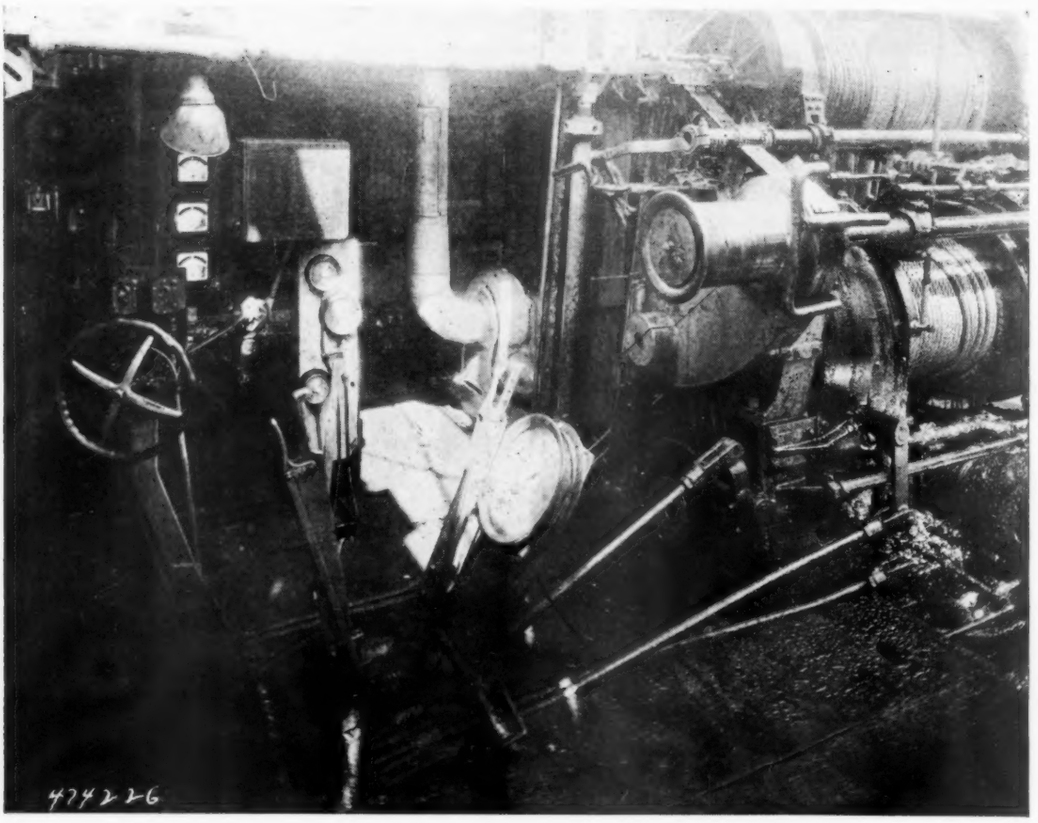


The controls on the rig

Union Oil Develops Portable Outfit *for* Shallow Drilling

By BRAD MILLS
Staff Representative

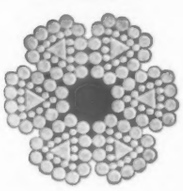
DEVELOPMENT of a portable drilling outfit which should be especially useful in shallow lease operations, on remote wildcats and on leases where the time element is important enough to demand immediate action, has been completed by Union Oil Company, the first assembly being in successful operation on the company's La Merced lease in the Montebello field. The result of several months' efforts, the unit is primarily a direct current, electric outfit employing gasoline engines to generate power.

Company engineers were aware of the need for a drilling outfit somewhat lighter than that used in the deeper fields. They decided that the ultimate in such an assembly should be one which could be moved easily and quickly rigged up, besides being a small consumer of fuel and water, an independent unit in remote districts, a flexible drilling unit and one capable of drilling to 5000 feet. There had often been a need for drilling a series of shallow wells in one district, and a recurrence of such a need in both proven and wildcat areas was to be expected. The increase in drilling depths in many proven fields had been responsible for development of equipment far too heavy and combersome to be removed intact upon short notice. The newer type of equipment also required too much time for assembly in the derrick, where certain conditions did not justify such a loss of time.

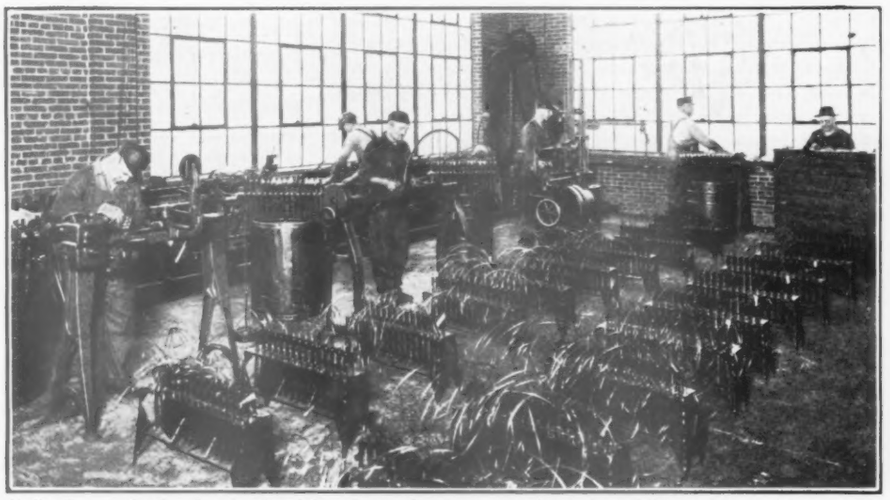
The outfit is unique, in that it is the first application of gasoline-engine power to drilling equipment that is proving superior to steam in both pulling power and flexibility. It is not, however, the first application of this type of power to the drilling of wells. The layout incorporates several new ideas and the finished unit should be termed an entirely new assembly in portable drilling outfits. The salient features of the original unit have attracted the attention of petroleum engineers all over the country.

The equipment consists chiefly of two duplicate direct current generators with direct connected exciters driven by duplicate gasoline engines, a direct current motor for driving the draw works, a direct current motor for the mud pump, necessary controls, and draw works and rotary table.

Two heavy truck trailers are used to transport as well as to support the generating units. Each contains a gasoline engine, generator and exciter, connected in line and arranged for immediate operation. The drilling motor, draw



LESCHEN LINES



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Our long experience in the oil fields has permitted us to learn the needs of the industry, and our facilities and research work have enabled us to develop a correct type of Leschen Line for every condition. Some of our specially designed lines are as follows:

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works and rotary table are mounted on a common steel base and are obviously moved as a unit. The mud pump and motor driving it are placed on H-beam supports and may be moved with ease.

Generators Gasoline Driven

Each generator and exciter is driven by a 150-horsepower gasoline engine. The arrangement is such that it is not possible to over-crowd or stall the motors, the governors being adjusted to maintain a motor speed of 1000 revolutions per minute. There is, however, a slight variation in speed, since sudden power needs or the necessity for quickly shutting off the power will obviously affect to some extent the operation of any type of power. Upon sudden applications of a full load, the engine speed may drop to around 950 revolutions per minute, while the speed may be increased for a very short period to 1050 revolutions per minute when the load is quickly thrown off. This uniform motor speed is accomplished by generator design which causes the voltage to drop off as the overload increases. It is obvious that overloading of the motor may approach the stalling point but this does not materially affect the speed of the engines.

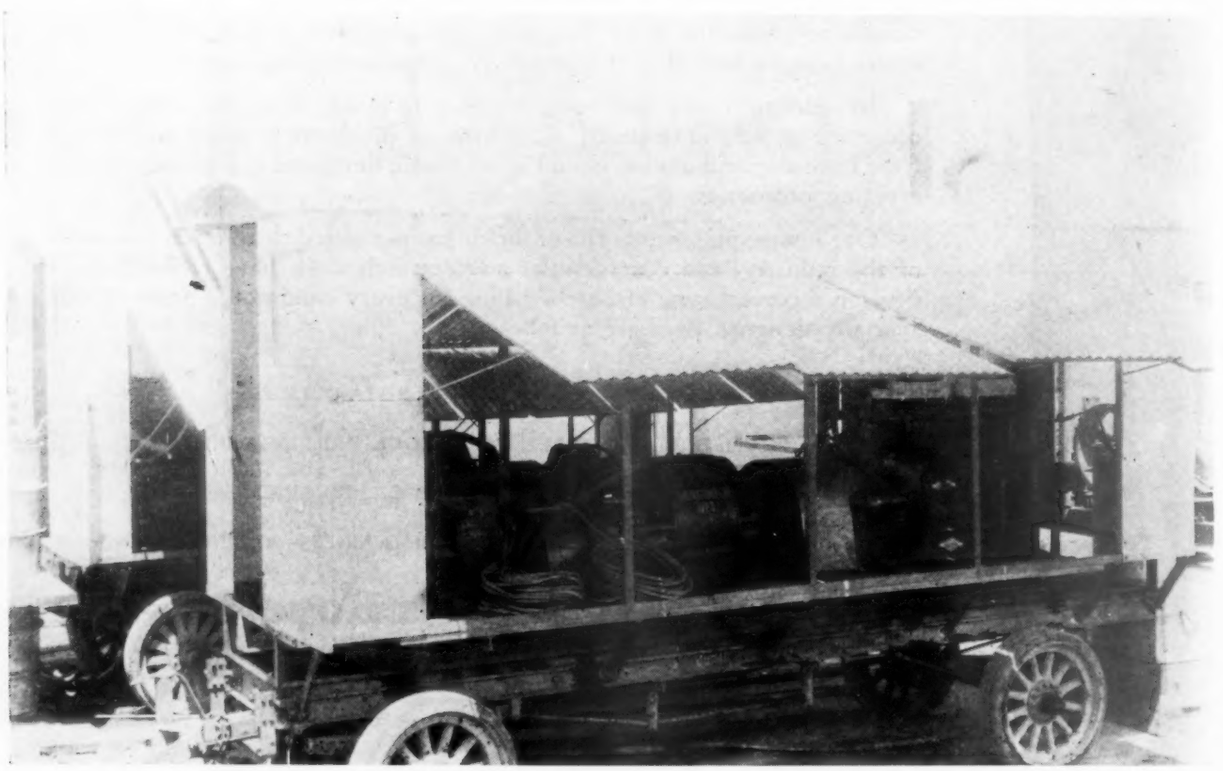
The drilling motor, draw works and rotary table are mounted in line on the steel frame. The draw works operates primarily with a three-speed transmission but is also equipped with secondary speed reducer. This arrangement gives six hoisting speeds and three table speeds. These gear changes, combined with the speed-torque characteristics of the motor, provide flexibility and pulling power which exceeds the range possible with steam. There is a wide overlapping of power range with the various speeds, just as it might be possible to travel faster in second speed in an automobile than in high gear where the motor was throttled down to a mimium speed.

The mud pump arrangement includes the conventional power pump and does not differ radically from the average electric unit. The fluid end is made from cast steel and works against pressures up to 1500 pounds. A 60-horsepower, fully enclosed motor is used and might be termed an integral part of the pumping unit. A texrope drive is used between the motor and pump shafts. This motor has the same speed control as that employed by the drilling motor, the arrangement giving a range equal to steam. The use of direct current makes such flexibility possible, alternating current motors not being as suitable for this type of work.

During actual drilling operations, one generator supplies power for the drilling motor and the other for the mud pump motor. The voltage of each generator has been regulated to a value within the limits of the equipment, the arrangement giving practically any desired speed with either motor. With a fixed value of field excitation, the motor speed varies with the amount of load carried, naturally being high with light loads and lower with heavier loads.

The generator field excitation characteristic works to advantage in operation of the mud pump drive, since the building up of pressure through clogging or other reasons results in an increased load on the pump motor, thereby reducing its speed and indicating the location of the trouble to the driller. The reduction in speed corresponds to an increase in torque, and a clearing of the mud line through the increased pressure is possible. When the mud line is completely clogged, the torque which the motor is capable of developing is held to a limit of about twice the full load rating. Even under the most adverse conditions the engine does not stall, the trouble being confined chiefly to the pumping unit.

In handling pipe coming out of the hole or when more



Two engine-generator sets, each consisting of G-E Type CD—135, 75-kw, 250-volt D-C. Differentially compounded generator for Ward-Leonard control, 11.5-kw D-C exciter and Climax Type Rl-6, 150 horsepower, 600 r.p.m. gasoline engine, mounted on truck trailer for rotary drilling. Union Oil Company of California.

The March of « « «

Engineering Progress

November Issues of the Oil Weekly carried special articles on Engineering Problems as follows:

Maintenance of Pressure at Sugarland
By George H. Reid, Staff Writer

Elevated Derrick Floor Eliminates Cellar
By Brad Mills, Staff Writer

Characteristics of Drilling Fluids
By C. P. Parsons, Petroleum Engineer

Centrifugal Separator Removes Sand From Drilling Mud
By Brad Mills, Staff Writer

Improvement in Production Practice
By W. W. Scott, Engineer, Humble Oil & Refining Company

Economic, Technical and Statistical Reports Presented Before the American Petroleum Institute

Mexico's Future Oil Possibilities
By Jack Logan, Staff Writer

The Mechanics of Oil Well Pumping
By H. E. Dralle, Petroleum Engineer

Engineering and Economic Aspects of Unit Operation
By T. E. Swigart, Superintendent Production, Shell Oil Company

Washing In With Gas and Water Under Pressure
By Floyd Swindell, Staff Writer

Unit Operation is Central Theme for Division of Production

Land and Lease Aspects of Unit Operation
By John P. West

December issues of *The* OIL WEEKLY will carry complete geological and engineering discussions of the development under way in Northern Mexico. This material has been prepared by a staff writer who has just completed an extensive trip through the area under discussion.

The future of one of the larger flush fields, which present indications would class as the most important market factors for 1931, will be forecast in a special feature giving full particulars on the development of this particular field up until December 1930.

power is required than the drilling motor can supply, the arrangement is such that manipulation of the master switch will throw the output of the mud pump motor generator through the drilling motor, doubling the power available under ordinary conditions. The mud pump is not needed when the combined power of the generating units is required for the drilling motor.

Fields Are Connected

The fields of the generators are connected in series and controlled as one field from the draw works controller when they are used together for hoisting. When one draw works motor is used, the two generators are connected in parallel during hoisting operations. Although the outfit includes only one drilling motor, it might be possible to use two motors to drive the draw works on heavier outfits. Should two motors be used to drive the draw works, one would be driven by the regular drilling generator and the other by the mud pump generator under maximum power requirements. The outfit incorporates the leading system of control.

While operating in parallel, the generators are self-adjusting, due to the drooping voltage characteristic which was touched upon in the description of the generating units. If there is a tendency for one generator to share more than its part of the burden and break the division of load, its voltage is reduced immediately by the action of the differential series field. The other generator soon draws its full portion of the load from the action of the one formerly tending to carry more than half of the burden. The arrangement is especially necessary, as it is difficult to operate the gasoline engines at exactly the same speed.

The control equipment is arranged so that either generator may be connected to the draw works drive. Thus the failure of one generating set would not prevent coming out of the hole under adverse conditions. With one generator temporarily out of commission, it probably would be necessary to use the low speed of the draw works to keep power requirements within the limit of one generator. Failure of one exciter can be overcome by using the other under full power of both generators.

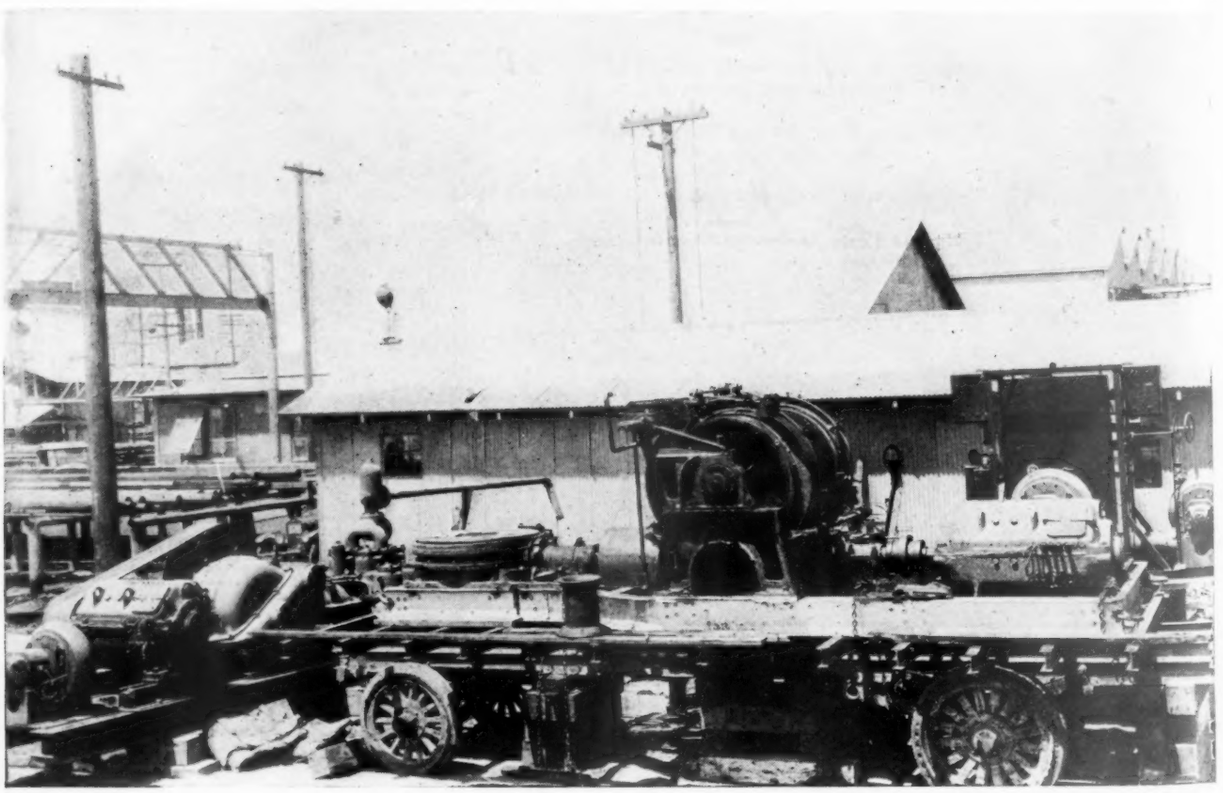
A feature of the outfit is the protection offered by the adjustable over-load-relay which opens the field circuit when tripped by overload. Under such conditions the equipment is shut down until the reason for the overload is corrected and the relay reset by hand.

Both motors are of the totally enclosed, forced ventilated type. Ventilating air carried to each motor is brought in from a point sufficiently removed from the derrick to prevent possibility of using a draft which may contain gas. Since the generating units are located a safe distance from the rig, they are of the open type. The mud pump motor develops 60-horsepower at 600 revolutions per minute and operates at 230 volts, while the drilling motor develops 100-horsepower on the same voltage.

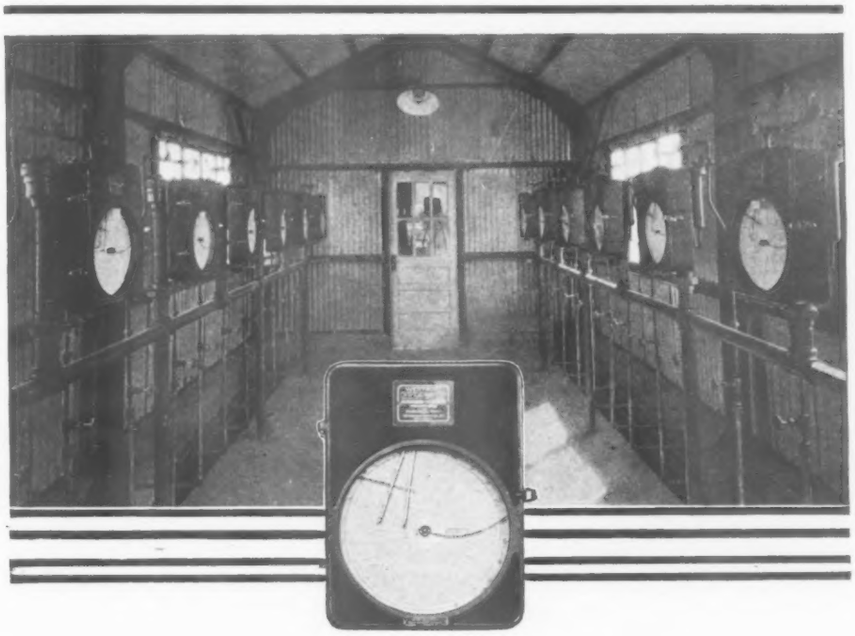
The generator voltage control system is responsible for the speed and direction of rotation of the motors and functions through variation of the strength and polarity of the generator separately excited fields.

E. P. Tallant and A. R. Rubel of Union Oil Company, and H. C. Bell of the General Electric Company largely designed the general assembly.

The portability of the outfit is outstanding. The complete equipment has been handled by four heavy trailers, while the smaller accessories were transported on the trucks which pulled the trailers. Besides providing ready portability, the outfit can be set up in the derrick ready to run in about 24 hours.



G-E Type MD-416, 100 horsepower, 230-volt D-C shunt forced-ventilated motor, with Ward-Leonard control, driving Doheny-Stone draw works and rotary table, and Type MD-414, 60 horsepower, 600 r.p.m. 230-volt similar motor, at left, driving Gardner-Denver mud pump, for rotary drilling. Union Oil Company of California.



Another Modern Station

Installs Westcott for Accuracy

76 Westcott Orifice Meters automatically measure and record the natural gas distributed to three major transmission lines from the Alto Meter Station, Richland Parish, Louisiana.

"The accuracy of this group of meters has been easily maintained well within commercial limits, at a reasonable cost," says the Superintendent in charge of this station.

Westcott Orifice Meters are standard equipment in modern plants for the accurate measurement and recording of all kinds of gases, steam and liquids in large volumes.

For complete information on large volume measurement write for Bulletin E-2. Or call in an American Meter Company engineer. There is one near you.

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Alto Meter Station, one of the largest and most modern distributing stations in the United States

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24 Hour Service

ONE of our numerous field stock yards is shown in the above illustration . . . . From these distributing centers (indicated on the map) we can make immediate deliveries of Chester oil well casing and line pipe.

Chester also makes all classes of Genuine Wrought Iron Tubular Goods.

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J. P. COONEY, 715-716 A. G. Bartlett Bldg., Los Angeles, Calif.

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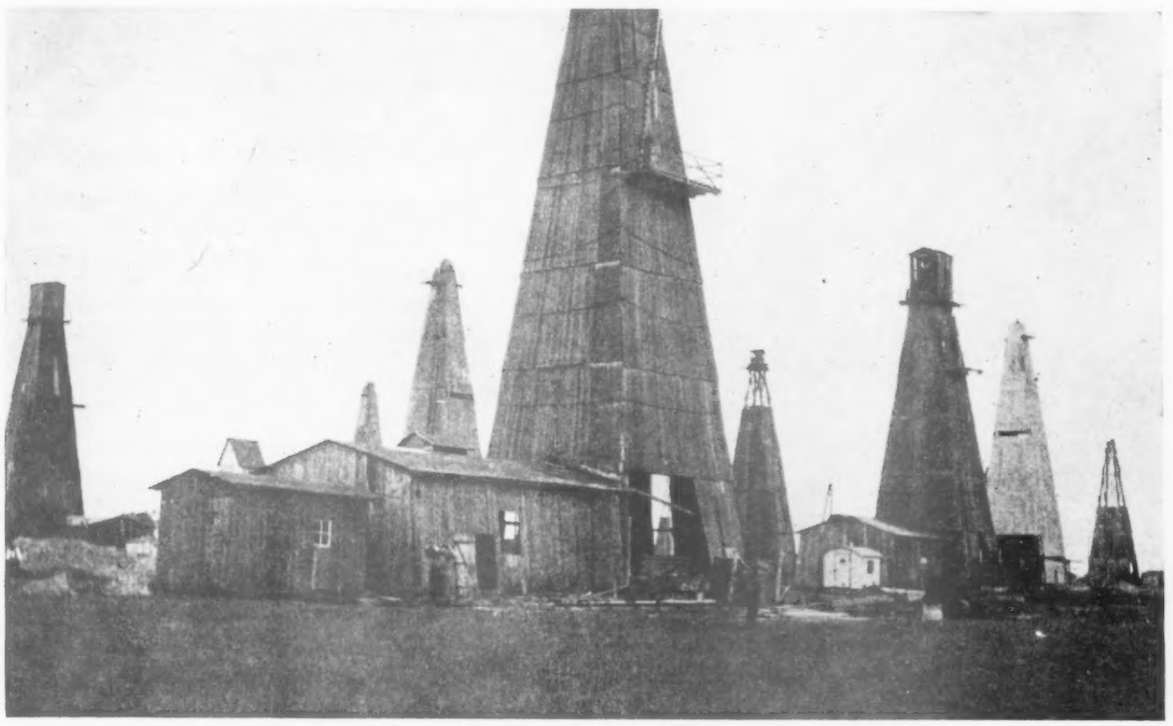
CHESTER

STEEL SPECIALISTS IN CASING FOR DEEP WELL DRILLING **CASING**

LINE PIPE



WORLD PETROLEUM IN REVIEW

Sources Of Production

Paris, France.—Surveys of the oil resources of this country show that the domestic production is only about 2½ per cent of the total consumption. Production is confined to two districts, Pechelbronn and Gabian.

The Pechelbronn field consists of approximately 170 square acres near Strasbourg. Exploitation of this field has been carried on since 1627, when the oil found near the surface was used for medicinal purposes. After the acquisition of Alsace-Loraine in 1918 the government took over the properties and turned them over to the concern known as Pechelbronn. Total output of this field for 1929 was 547,000 barrels.

Extensive geological surveys in the Gabian district resulted in an active drilling campaign being started in 1923. By the end of 1927 31 wells had been drilled, most of which have been abandoned. Production for 1929 for this field amounted to 21,000 barrels. The oil has a paraffin base with a light trace of asphalt and by the cracking process yields 50 per cent gasoline.

Government Controlled Operations

Valparaiso, Chile.—Drilling operations in many of the fields that have been exploited in this country have been conducted by the government with only a small degree of success. The government so far has appropriated approximately $3,000,000 for drilling and operations have hardly begun. This experience has proven costly to the government and it seems that all drilling operations will eventually be turned over to individual companies as has been done in other countries. The ideal structural conditions in the southern part of the country seem to justify development by some intelligently managed oil company.

Development of good production in this region is fairly certain, and transportation facilities will stimulate conditions for the opening of a field. A Belgian company which was awarded a contract about a year ago, has done very little toward developing its possibilities in the territory and the chances are now that other companies will be granted concessions to drill in the same area if agreements are made that will insure active drilling campaigns by the concession holders.

THE PICTURE—Nienhagen Field in Germany. (Courtesy A. Beeby Thompson, London).

Field Operations In Vera Cruz

Mexico City, Mexico.—A report of the oil fields at Agua Dulce and Tonala show that there are 60 potential producers, all drilled within the last two years. Production of these wells for the latter part of 1929 was 32,000 barrels but many of the wells have been pinched in until the production is now only 18,000 barrels. A pipe line has been completed from Agua Dulce to Minatitlan, with a branch to Manchital.

Prospecting is being carried on by El Aguila Corral Nueve, in the State of Vera Cruz, where a wildcat well is being drilled. This company has just completed a producer at 6,400 feet, which is the deepest well in the southern fields.

New Tests for Waitangi

Wellington, New Zealand.—Proposal of officials of Taranaki Oilfields, Ltd., is to the effect that tests for further production in Waitangi be started immediately. Shallow wells were discovered in this field before the war but it was not until this last year that adequate prelimi-

International Newsreel says that this is the first picture of John D. Rockefeller (left) taken in golf knickers. It was taken in Bremen as the party was leaving the ship for a tour of Europe, from which they recently returned. Others in the picture are, left to right: Mrs. A. Rockefeller, Mrs. W. Aldrich, John D. Rockefeller III, Mrs. Charles S. McCain and Commodore Johnson of the S.S. Europa

nary work could be carried on in order to sufficiently justify the expenditure of money for other tests.

Australian Wildcat Drilling

Sydney, Australia.—Oil drilling activities in the Roma district has been shifted from Hospital Hill to Blythedale, about 10 miles east of Roma. There are now in this field three tests owned by Australian Roma Oil Company and one each by Roma Oil Corporation and Eastern Roma Oilfields, Ltd. Swabbing operations in some of the tests resulted in crude oil and water being showered nearly 20 feet up on the derrick. The hard shale formations at which this oil has been found is at a depth of approximately 3650 feet.

Another of the important fields which is experiencing some wildcatting activities is the Lakes Entrance field. Two sands have been found here from which oil and gas are produced. None of the wells completed so far has had production of more than three barrels per day and from all appearances the field will be strictly on a pumping basis.

The Tertiary formation found in this territory discloses the fact oil will be found in small quantities over a very large area as it is thought this formation is some 3000 square miles in extent.

Drilling Reports In Venezuela

Maracaibo, Venezuela. — Completions recorded for the week ended November 14 show that Creole Petroleum Corporation has completed LP-11 in the Las Palmas field at 2262 feet for an initial production of 344 barrels and No. 28 of the Quiriquire field at 2733 feet for a total production of 624 barrels per day. Gulf-Creole's Petan 2, in Lagunillas field, which was completed at 3210 feet for an initial production of 500 barrels daily on ¾-inch choke is an offet that has substantially proven up a large amount of acreage.

Caribbean Petroleum Corporation's MG-219 at Mene Grande field was brought in for 835 barrels at 3174 feet and MG-224 was completed at 2702 feet for an initial production of 1188 barrels per day. V. O. C. completed its R-436 at La Rosa-Ambrosio for 132 barrels and R-437 for 800 barrels daily. R-436 is a high pressure gas producer.

Prussian Acquisition Of Oil Tract

Berlin, Germany.—Acquisition of oil producing lands in the province of Oelheim by Prussia has recently been announced. This territory is near Hanover and was acquired from the Anton Raky interests. Four wells already are in operation and two other wells are nearing completion.

Colon Corporation's Activities

Maracaibo, Venezuela.—Activities of Colon Oil Corporation in the fields of this country show that for the week of November 14 total production of the company was 96,959 barrels. The T-72 well of this company was brought in for an initial production of 450 barrels flowing through 11/16-inch flow plug with a casing pressure of 290 pounds and a tubing pressure of 150-160 pounds.

Drilling Campaign To Start

Mexico City, Mexico.—Eagle Oil Company is soon to start a drilling campaign in the Jalpa de Mendez district of the State of Tabasco. The district has been thoroughly studied from the geological standpoint and plans of the new program call for the drilling of a large number of test wells. Activities will begin in the near future as soon as the company can move on machinery and make locations.

Pipe Line Construction

Moscow, U. S. S. R.—Plans for development of a program of refinery construction for the coming year calls for the building of a pipe line from the Caspian Sea to this city to supply one of the large refineries to be built here. The line will be approximately 1600 miles long and will carry crude from the Baku field and the Grozny field to the capitol.

Curtailment in Roumania

Bucharest, Roumania. — The curtailment program which went into effect in July has had a period of trial that has extended over four months, long enough to show that it is a threatened failure with no restrictions placed on the drilling program along with the proration measures.

The fallacy of this measure has been seen in the fact that one of the first instigators of the movement for the curtailment convention has given notice of its withdrawal from the convention on November 30. In an effort to forestall the movement of the Steaua Romana in this direction, Astra Romana and Romana Americana proposed to suspend all drilling activities in the proven fields on November 1.

Soviet Oil Production

Moscow, U. S. S. R.—Production of crude oil for the month of September amounted to 12,047,920 barrels, an increase of 21,900 barrels over production figures for the month of August and an increase of 2,900,000 barrels over September, 1929. Plans of the production program for the fourth quarter of 1930 show an intended production of 38,700,000 barrels, a monthly production of 12,900,000 barrels.

Introduction of materials, capital and engineering ability into this country has resulted in this increased production, opening up new fields and creating a source of cheaper products for exportation.

Moore CALF WHEEL

AS GOOD AS THE CHAMPION DERRICK

Design, based on long practical experience, and careful fabrication are responsible for the strength and long life of the Moore Steel Calf Wheel. The shaft is heated and shrunk on the spoke type gudgeons and riveted in place. The channel steel spokes are bolted tangent to the shaft by sturdy wing plates, thus giving a direct push on the shaft. The brake rim is of rolled steel plate segments with wooden cants. The inside rim extends ½" above the brake cants to prevent interference between the brake band and sprocket chain. Shafts are regularly furnished in either 16" or 18" diameter, with ½" wall. They are also available with a heavier wall for extremely heavy work. Moore Calf Wheels conform strictly to A. P. I. dimensional standards.

Moore

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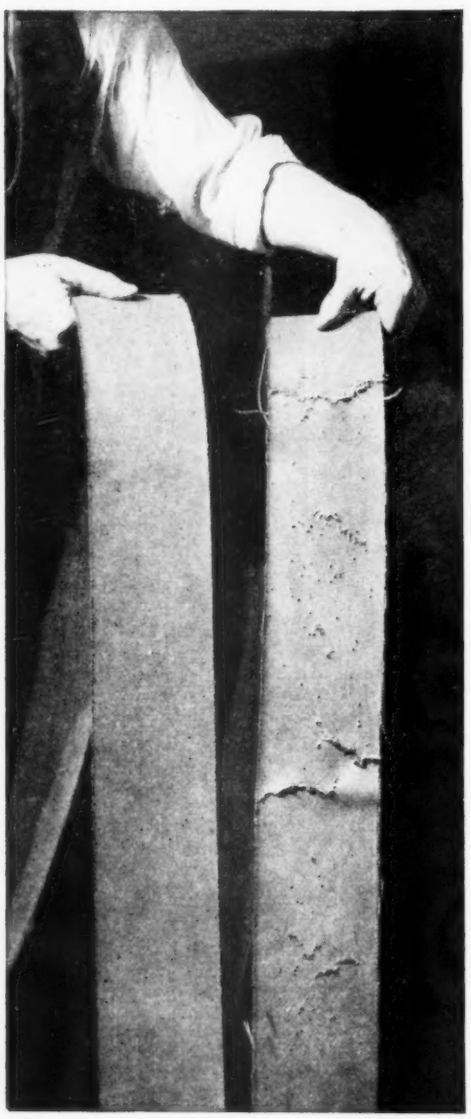
Stocks in All Principal Fields

This NEW *in every industry that transmits power*



This photo shows the result of a recent test of a Goodrich Highflex belt with another belt, equal in original appearance and specifications. Both belts were joined into one piece for the test. After 425 hours of service, many times more severe than a belt ever receives in actual use, this photograph was taken. The astonishing superiority of the Goodrich belt is due largely to the Highflex friction rubber. Full details are available to users of belting on request.

Goodrich Highflex Belting establishes remarkable endurance record at South Vernon, Texas, wells

IN the oil industry, as in every other where belts are used to transit power, Goodrich Highflex Belting proves in actual performance the same endurance it shows in laboratory tests.

Read the report from R. E. Ryle, Superintendent of the Petroleum Producers Co., South Vernon Field, Texas:

"The Highflex Belt was installed August 1, 1927. Since that time it has been pumping nine wells until very recently when two wells were closed.

"The depth of the wells is 2400 ft. The motive power is supplied by a 35 H. P. Superior gas engine with a 14" clutch pulley operating to an 18-ft. band wheel. About a year ago the drive was operating with an 18" clutch pulley with the band wheel making 19 R.P.M. At the present time the band wheel runs at 14 R.P.M. The belt speed is approximately 780 ft. per minute.

"For the life of the power, it has produced an average of 150 barrels of water and 30 barrels of oil per day."

Mr. Ryle advises that the best service he has been able to get on any belt for this drive before installing Highflex was 14 months. *The Highflex Belt has now been running 28 months and is still in excellent condition.*

And it may be good for double its present service.

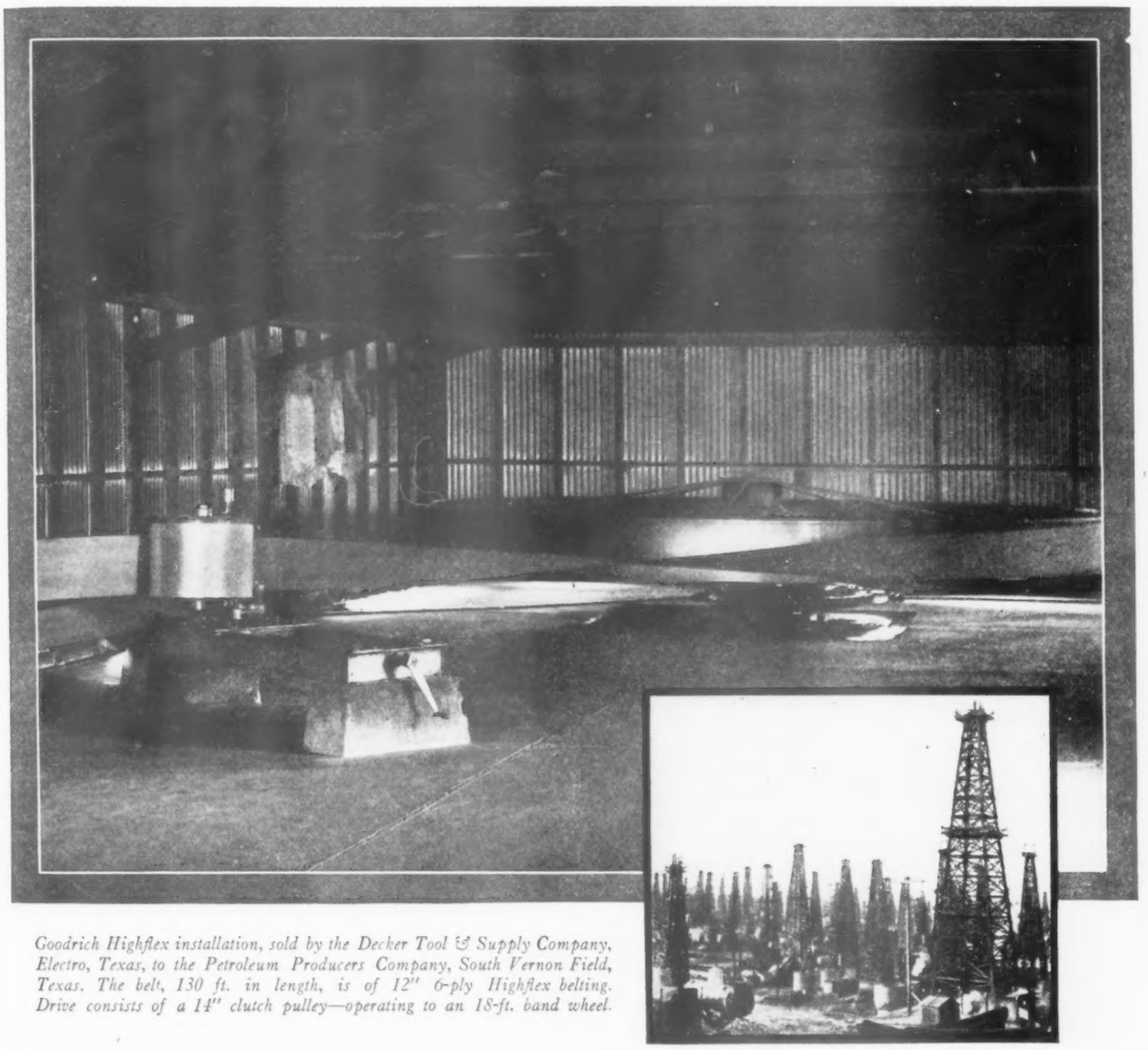
On twist drives, as on straight drives—at low belt speeds and at high—over small pulleys as well as large—Goodrich Highflex Belting has established unrivaled performance records.

Upkeep costs are cut to a minimum. Stretching—that must frequently be taken up by cutting in other types of belting—is almost entirely eliminated. With it—the loss of power due to loose and slipping belts.

And the *endurance* reports—from every industry—prove the ultimate economy of Highflex Belting. Instances are on record where transmission belts made of Highflex rubber have outworn all other belts by two or three to one!

In effect—these records tell the same story as is told by the photograph at the left. This is the result of a recent test of a Goodrich belt, made of Highflex rubber, with another belt equal in original appearance and speci-

RUBBER LOWERS COSTS



Goodrich Highflex installation, sold by the Decker Tool & Supply Company, Electro, Texas, to the Petroleum Producers Company, South Vernon Field, Texas. The belt, 130 ft. in length, is of 12" 6-ply Highflex belting. Drive consists of a 14" clutch pulley—operating to an 18-ft. band wheel.

fications. Any belt user is invited to write for full details about this test.

HIGHFLEX rubber is a Goodrich "belt friction"—the real secret of superiority of Goodrich Highflex Belting.

It has amazing power of recovery and ability to stand constant flexing. It is important because of the strain to which the belt is subjected every time it turns around the pulley. The belt plies continually slide over one another.

Continual stretching and distortion tend to weaken every fabric fiber. Highflex rubber absorbs this strain. Its development by Goodrich revolutionizes belt performance.

Would you like to have further information about Highflex belting?

Write The B. F. Goodrich Rubber Co., (Est. 1870), Akron, Ohio. Pacific Goodrich Rubber Co., Los Angeles, Calif. In Canada: Canadian Goodrich Co., Kitchener, Ontario. Distributors everywhere. The International B. F. Goodrich Corp. (Export).

HIGHFLEX BELTING

Another B. F. Goodrich *Product*

Mining Accounts For Third of Germany's Oil Output

By ROY E. LEIGH
Special Foreign Representative

A LITTLE more than one-third of German oil production, or approximately 700 barrels per day, is derived from the oil mine operated by Deutsche Erdol-Aktiengesellschaft at Wietze, near Hannover. As a similar mine at Pechelbronn in Alsace has been described in detail,* and for the further good reason that one is not permitted to inspect the underground operations at Wietze, little space will be devoted to German oil-mining operations. Every courtesy is shown by officials of the Deutsche Petroleum-Aktien-Gesellschaft and the Deutsche Erdol-Aktiengesellschaft above ground; but, for reasons of company policy, one is not permitted to enter the shaft or explore the galleries. For this, no complaint or criticism is implied, as such a visit would have involved a serious interruption in a continuous process and would have required the services of an engineer having other routine duties to perform. If the German engineers who tunnelled into the bowels of the earth and risked their lives at every step in carrying out the initial experiments of a process which may one day materially increase the world's recoverable supply of petroleum, have developed some new and important methods which they are not yet ready to reveal to the world, one cannot blame them for hoarding their secret; one can only speculate with the keenest interest as to what it might be.

The Wietze mine is operated by the same German engineers who opened the Pechelbronn mine during war-time; and, while one is familiar with the methods employed in that initial experiment, it is known that a number of important advances have been made in the development of the process. It is obvious from the surface, however, that the Germans still cling to one of their basic principles which has been discarded by their French successors at Pechelbronn,—that of the actual removal of the oil-bearing sand.

*The OIL WEEKLY, August 1, 1930, page 118.

Sand bailed from wells in Wietze field

Pithead of the D. E. A. Oil Mine, Wietze Field, Germany

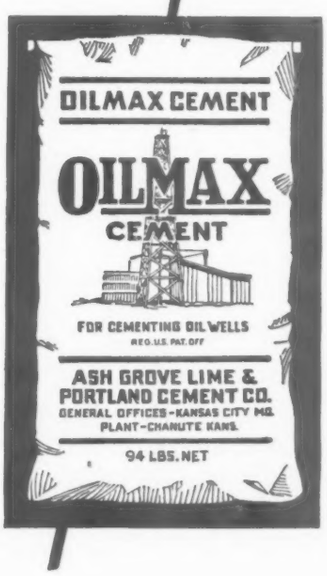
The sand is mined, presumably by pick and shovel or by pneumatic tools; and is brought to the surface by hoisting methods common to all deep mining operations, where it is washed in hot water lest no drop of recoverable oil should escape. This occurs in a large cylindrical tank, the outlines of which may dimly be seen through the open walls of the building shown in the accompanying illustration. The resulting oil and water are separated by methods not difficult to conceive; and, after further being purified to remove lingering traces of water and sand, is sent to the refinery where it is handled as any other crude. The spent sand is carried away by aerial cable and is dumped onto an ever-increasing heap, a photograph of which is shown herewith.

Proverbial German thoroughness is illustrated by the fact that some 70 barrels of oil per month are recovered from the laundering process by means of which the miners' clothing is cleaned after each tour of duty underground.

C. C. Julian well, Oklahoma City field . . . cemented with Oilmax.

Why OILMAX CEMENT

GIVES BETTER PROTECTION AGAINST MUD CONTAMINATION



CONTAMINATION by drilling mud causes a large percentage of cementing failures. Even a *small amount* of mud will *weaken* your cement and leave it *highly porous.* Oilmax Cement slurry reduces the danger of contamination because *less* mixing water is required to give efficient, non-abrasive pumping consistency. Less water means a heavier cement slurry with greater ability to displace mud.

Oilmax Cement gets as strong in 24 hours as ordinary Portland Cement in 10 days and *continues* to gain in strength . . . no admixtures or accelerators are required. It is water-tight, non-shrinking . . . flows into every crack and crevice without bridging. Give your oil well investment OILMAX protection. The best is always cheapest! Oilmax Cement is obtainable thru dealers.

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of Growing Popularity Gained Through Superior Performance!

DE LA VERGNE SILENT DIESELS

DE LA VERGNE, The Pioneer Solid Injection Diesel Engine Builder, feels highly complimented as a result of recent recognition of the superiority of solid injection as indicated by the following extract from BRITISH MOTOR-SHIP February, 1930:

"At the present time 60 per cent of the four-stroke engines on order are to be built as airless-injection motors, whereas two years ago the percentage was under five. There is no gainsaying the flight from air injection, at any rate so far as this class of machinery is concerned, and of the inquiries being received for four-stroke plant about 60 per cent call for solid injection of fuel."

Four Cycle - Solid Injection

DIESEL ENGINES

"America's Oldest Oil Engine Builders — 1893 - 1930"

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De La Vergne has been building 4 Cycle Solid Injection Engines since 1893.

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Demand Slump Out-Distances Production Decline

NECESSARY downward revisions in state production limits have aggregated a reduction that leaves an unfavorable margin between actual and allowable output to the extent of nearly 33,000 barrels daily. Curtailment continues to bring the actual production curve lower and lower in the meanwhile, indicating the feasibility of attaining an ultimate balance between supply and demand; a degree of stability that will determine the future course of the crude and refined oil market.

Production estimates of the American Petroleum Institute for the week ending November 29 reveal another decline in daily average crude production amounting to 15,950 barrels. This brought the national total down to a new low figure on the decline, of 2,265,900 barrels daily. Kansas, Texas, Gulf Coast, Arkansas, Eastern States and California contributed to last week's decline to the extent of 19,750 barrels. This was offset by gains in Oklahoma, North Louisiana and Rocky Mountain states aggregating 3800 barrels daily. The increases reported were negligible, however, while the declines reported by California, Eastern States, Texas and Kansas were important. California production showed a decline of 7300 barrels, attributed to Elwood, Huntington Beach and Long Beach. Eastern States production was off 8750 barrels, as a result of stringent curtailment in the Pennsylvania fields. The decline of 1750 barrels for Texas, outside of Gulf Coast, was attributed to Gray, Reagan, Winkler Counties and Darst Creek. Kansas production was also off 1600 barrels, constituting a generally lower production in practically all areas of that state.

According to the accompanying table, showing production limits and actual output of the various states, the national prescribed production limit is now down to 2,233,014 barrels daily, while actual production last week amounted to 2,265,900 barrels, indicating a daily excess of 32,886 barrels. It will be noted that California, Louisiana and Texas are now the chief excess producers, while Oklahoma production continues to be maintained more than 50,000 barrels below the state allowable figure of 545,000 barrels. The situation in California has again reached the stage where something must be done to prevent a crash in the crude market structure. While efforts have been made to prevent a cut in California crude prices, such action now looms a possibility. California production is nearly 55,000 barrels daily above current requirements and unless immediate steps are taken to bring production down to the prescribed level, there is danger of a slash in crude prices. The industry in California has been directly affected by the lowering of crude and refined oil prices in the Mid-Continent area and a price adjustment can only be averted through the medium of drastic production curtailment. One favorable factor in the California situation is the upholding of the gas conservation law by the district court of appeals in Los Angeles. This decision is important at this time since it prevents the overthrow of existing curtailment efforts.

In the Eastern States, directors of the Middle District Oil Association of Pennsylvania have ordered producers in the Warren County field to return to 70 per cent proration, effective immediately and to continue on that basis until further notice. This move resulted from a resolution passed recently by the general oil conservation board to return to proration of 50 per cent in the Bradford-Allegany district and to 30 per cent curtailment in the fields south of Bradford.

Over-production has seriously affected producers in the Pennsylvania fields and has been mainly responsible for the siege of price reductions there. Last week's decline in production of the Eastern territory gives confirmation to the move being made there to balance supply with demand.

Texas is now striving toward a new production goal of 680,238 barrels daily. Last week's decline of 1750 barrels, in the area outside of the Gulf Coast, hardly represents the effect of the new state-wide proration order, although it does show that the trend is consistently downward in this state. Since the indicated excess production is now 52,662 barrels, it is apparent that a series of sizeable declines are in order. At present, the excess shown for the state of Texas is being more than offset by the deficit in Oklahoma's production. It will be noted that Kansas has succeeded in bringing production down to within 2096 barrels of the prescribed normal daily limit for that state.

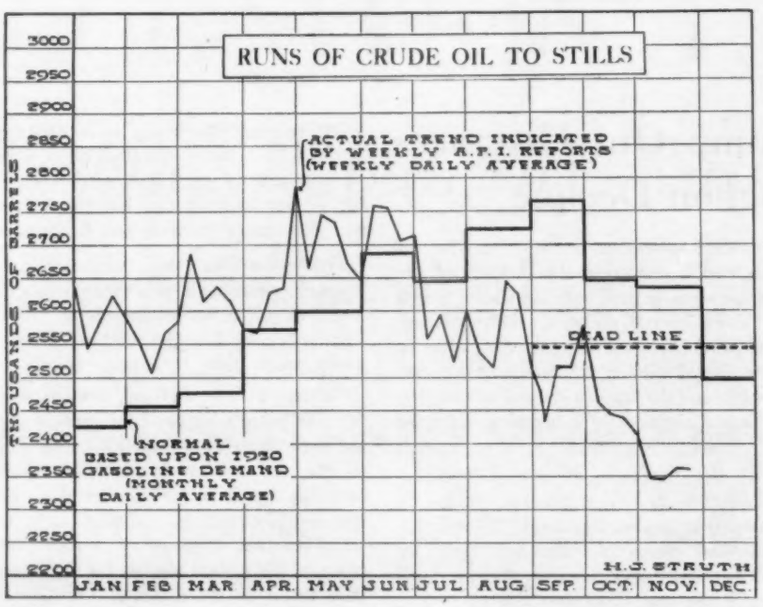
Following are the more important changes in production reported last week by the American Petroleum Institute:

		Barrels
Gray County	Decrease	2,500
Reagan County	Decrease	1,250
Winkler County	Decrease	1,650
Yates	Increase	1,950
Darst Creek	Decrease	4,650
Barbers Hill	Increase	2,050
Carr City	Decrease	1,000
Duncan District	Decrease	1,100
Earlsboro	Decrease	4,250
East Earlsboro	Decrease	1,350
Konowa	Decrease	1,700
Oklahoma City	Increase	19,450
St. Louis	Decrease	1,750
Elwood	Decrease	5,200
Huntington Beach	Decrease	1,000
Long Beach	Decrease	2,000
Playa del Rey	Increase	1,700
Ventura Avenue	Increase	1,900

Refinery Runs Now Are At Lowest Point of Year

REFINERY runs of crude during the week ending November 29 were reduced to the lowest point this year, when American Petroleum Institute figures showed that the total had been reduced to 15,724,000 barrels, or a daily average of 2,246,000 barrels. On a Bureau of Mines basis, this represents a national daily average throughput of 2,313,000

MARKET SECTION



barrels, or a net decline from the preceding week of 47,000 barrels daily.

Despite this further decline in still runs, stocks of gasoline showed a gain of 755,000 barrels, indicating that demand had been slowed up still further by unfavorable weather conditions in various parts of the United States. Total gasoline stocks reported to the American Petroleum Institute as of November 29 amounted to 37,287,000 barrels, compared with 36,532,000 barrels on November 22. It is logical to expect a sharp decline in gasoline demand at this time of year, and even though runs to stills are curtailed to the point where the resultant production of gasoline is lower than average daily requirements the advent of severe weather conditions often results in extraordinary curtailment of buying. Reports of severe weather in the Northeast, Central West and Rocky Mountain areas during the past week have undoubtedly influenced the necessity for storing gasoline that would have been used up under more favorable weather conditions.

The results obtained by refiners in bringing operations under the present degree of control are indeed gratifying. If still runs schedules are maintained at this level for any length of time, it is obvious that stocks of gasoline will be materially reduced over a period of weeks intervening between now and April 1, 1931. Runs are now actually below the economic

CRUDE RUNS TO STILLS, GASOLINE AND GAS AND FUEL OIL STOCKS, WEEK ENDING NOVEMBER 22, 1930

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting Total	Potential Capacity Reporting Per Cent	Crude Runs to Stills Total	Crude Runs to Stills Daily Average	Crude Runs to Stills Per Cent Operated	Gasoline Stocks	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,006,000	429,400	70.1	5,343,000	11,566,000
Appalachian	141,300	132,500	93.8	499,000	71,300	53.8	766,000	1,029,000
Indiana, Illinois, Kentucky	390,800	381,000	97.5	1,803,000	257,600	67.6	4,270,000	3,914,000
Oklahoma, Kansas, Missouri	461,100	412,200	89.4	1,807,000	258,100	62.6	2,108,000	4,603,000
Texas	809,000	743,500	91.9	3,692,000	527,400	70.9	6,393,000	10,730,000
Louisiana-Arkansas	266,600	262,000	98.3	1,037,000	148,100	56.5	1,253,000	2,138,000
Rocky Mountain	150,100	139,700	93.1	317,000	45,300	32.4	1,509,000	1,017,000
California	898,500	887,600	98.8	3,875,000	553,600	62.4	14,890,000	104,257,000
Total Week November 22	3,730,100	3,571,200	95.7	16,036,000	2,290,800	64.1	36,532,000	139,254,000
Total Week November 15	3,730,100	3,570,400	95.7	16,049,000	2,292,700	64.2	37,263,000	139,799,000
The total U. S. figures for last year, shown immediately below, are not comparable with this week's totals because of difference in percentage capacity reporting.								
Total November 23, 1929	3,678,700	3,510,300	95.4	18,544,000	2,649,100	75.5	35,805,000	*145,130,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included above in the Totals of Their Respective Districts.								
Texas Gulf Coast	529,500	529,500	100.0	2,847,000	406,700	76.8	5,149,000	8,000,000
Louisiana Gulf Coast	147,500	147,500	100.0	713,000	101,900	69.1	986,000	1,173,000

*Final revised.

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

	Necessary Daily Average 4th Quarter 1930	Quota Limit Prescribed to Correct Previous Excesses	Actual Daily Average Week Ending November 29, 1930	Excess
Arkansas	59,518	59,518	51,900	—7,618
California	654,034	545,000	599,900	54,900
Kansas	115,407	105,554	107,650	2,096
Louisiana	57,704	57,704	73,550	15,864
Oklahoma	653,252	545,000	486,950	—58,050
Texas	767,167	680,238	732,900	52,662
Balance of U. S.	230,000	230,000	213,050	—16,950
Total	2,537,082	2,233,014	2,265,900	32,886

limit conducive to a normal reduction of inventories and this situation is bound to result favorably at a later date when it will become necessary to increase runs to take care of gradual increased demands. The present over-supply situation demands a speedy restoration to normalcy and by maintaining runs at this level for even the next four to six weeks is bound to result in earlier realization of the gasoline inventory goal the industry has set for itself.

California Crude Market Very Weak; Gasoline Prices Being Shaded

A higher crude output than the market can readily absorb, abundance of gasoline, a trend toward lower crude prices, and a growing public sentiment toward lower retail gasoline prices have combined to complicate matters in California. Leading marketers, who are incidentally also producers, some time ago attempted to mould public sentiment by appealing for a toleration of higher gasoline prices, an upward revision having been held as the logical solution to the industry's principal ills. Gasoline prices were more or less jacked up and crude prices were reduced slightly. Since this revision, Mid-Continent conditions and prices have undergone vast changes and California seems to be higher than the average of other districts. The press, which generally favored higher gasoline prices when they were supposedly warranted, has now begun to cite the difference between crude and gasoline prices in California and those in the Mid-Continent and Eastern points.

Abandonment of the 20½-cent retail gasoline price in the Los Angeles district was considered last week, but major marketers are still of the opinion that such price is fair. Service stations are shading this price in all parts of the city and the Pacific Northwest is also selling at less than the prosted prices. One theory holds to the belief that if gasoline prices could be reduced uniformly by about four cents, the market would survive in better shape than if the present ragged price-cutting continues.

The crude market has been weak, but the weakness has been concealed by posted prices in all fields except Playa del Rey, where various prices prevail. The difference in California prices and those in the Mid-Continent is being widely discussed and there is some doubt as to wether slashes on the Pacific Coast would bring about the desired results. What the state needs is a lower production, but it is admitted that further cuts would seriously hamper many

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS
(Barrels of 42 gallons)

	Week ended Nov. 22		Week ended Nov. 15
AT ATLANTIC COAST PORTS—			
Baltimore	232,000		404,000
Boston	107,000		.....
New York	1,194,000		597,000
Philadelphia	275,000		88,000
Others	230,000	"A"	226,000
Total	2,038,000		1,315,000
Daily Average	291,143		187,857
AT GULF COAST PORTS—			
Galveston District	17,000		57,000
New Orleans and Baton Rouge	.....		.....
Port Arthur and Sabine District	.....		.....
Tampa	.....		.....
Total	17,000		57,000
Daily Average	2,428		8,143
AT ALL UNITED STATES PORTS—			
Total	2,055,000		1,372,000
Daily Average	293,571		196,000
Daily Average Four Weeks Ended	247,107		238,536
Distribution of Total Imports is as Follows:			
Crude	1,197,000		658,000
Gasoline	274,000	"A"	306,000
Gas Oil	66,000		18,000
Fuel Oil	518,000		390,000
Total	2,055,000		1,372,000

"A"—Revised.

CALIFORNIA OIL RECEIPTS AT ATLANTIC AND GULF COAST PORTS
(Barrels of 42 gallons)

	Week ended Nov. 22		Week ended Nov. 15
AT ATLANTIC COAST PORTS—			
Baltimore	55,000		46,000
Boston	52,000		.....
New York	332,000	"A"	120,000
Philadelphia	104,000		40,000
Others	137,000		.....
Total	680,000		206,000
Daily Average	97,143		29,429
AT GULF COAST PORTS—			
Total	.....		.....
Daily Average	.....		.....
AT ATLANTIC AND GULF COAST PORTS—			
Total	680,000		206,000
Daily Average	97,143		29,429
Daily Average Four Weeks Ended	79,571		62,643
Distribution of Total California Oil Receipts is as Follows:			
Gasoline	472,000		166,000
Gas Oil	156,000		.....
Fuel Oil	52,000	"A"	40,000
Total	680,000		206,000

"A"—Revised.

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	671,050	111,700	672,650	178,300	37,650	58,500	142,250	73,850	688,850	2,634,800	81,574,650
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November 1	524,500	114,350	615,050	193,150	42,900	53,050	121,400	103,050	595,600	2,363,050	16,541,350
November 8	489,650	117,550	587,550	188,900	43,900	52,050	119,300	101,450	596,900	2,297,250	16,080,750
November 15	506,350	111,700	581,350	188,950	44,050	51,950	117,300	101,100	601,800	2,304,550	16,131,850
November 22	484,200	109,250	573,050	191,250	44,100	51,950	118,750	102,100	607,200	2,281,850	15,972,950
November 29	486,950	107,650	571,300	190,950	44,200	51,900	110,000	103,050	599,900	2,265,900	15,861,300
Increase	2,750	.....	.....	.....	100	.....	.....	950	.....	.....	.....
Decrease	.....	1,600	1,750	300	.....	50	8,750	.....	7,300	15,950	111,650

TEXAS
(Outside Gulf Coast)

PANHANDLE DISTRICT

	Nov. 29	Nov. 22
Carson County	5,600	6,100
Gray County	53,100	55,600
Hutchinson County	14,250	13,550
Wheeler County	400	500
Others	300	300
Total	73,650	76,050

NORTH TEXAS

Archer County	13,350	13,500
Burkburnett	7,600	7,600
Electra	11,000	10,100
Iowa Park-KMA	4,400	4,400
Montague and Cooke Counties	9,300	9,300
Wilbarger	16,950	17,000
North Young	10,050	9,300
Others	1,750	1,750
Total	74,400	72,950

WEST CENTRAL TEXAS

Brown County	4,950	5,000
Callahan County	3,000	3,000
Coleman County	2,650	2,400
Eastland-Desdemona	4,900	4,900
Jack County	1,950	2,000
Palo Pinto County	450	450
Shackelford County	5,100	5,150
Stephens County	5,350	5,400
Throckmorton County	700	750
South Young County	3,350	3,400
Others	1,700	1,750
Total	34,100	34,200

WEST TEXAS

Crane-Upton Counties	35,050	35,000
Crockett County	1,900	2,050
Ector	7,950	4,850
Howard County	27,850	27,500
Jones County	1,400	1,400
Mitchell-Scurry Counties	2,100	2,200
Pecos County	4,100	2,800
Reagan County	25,150	26,400
Winkler County	54,850	56,500
Yates	103,450	101,500
Others	6,400	6,400
Total	270,200	266,600

EAST CENTRAL TEXAS

Boggy Creek	2,100	2,250
Corsicana-Powell	5,250	5,200
Currie	300	300
Mexia	3,850	3,850
Nigger Creek	150	150
Richland	150	150
Van Zandt	27,500	27,600
Wortham	600	600
Others	200	200
Total	40,100	40,300

SOUTHWEST TEXAS

Chapman-Abbott	6,000	6,500
Dale	250	300
Darst Creek	29,650	34,300
Laredo District	14,750	13,950
Luling	9,500	9,600
Lytton Springs	700	750
Salt Flat	16,100	15,600
Somerset	1,300	1,300
Others	600	650
Total	78,850	82,950
T'tl Tex. (outside Gulf Coast)	571,300	573,050

TEXAS GULF COAST

Barbers Hill	22,750	20,700
Batson	1,100	1,100
Big Creek	3,300	3,400
Blue Ridge	1,600	1,600
Boling	900	900
Damon Mound	700	700
Esperson	2,800	2,800
Fannett	550	700
Goose Creek	4,350	4,300
Hankamar	1,850	1,900
Hull	7,850	7,900
Humble	12,900	13,400
North Dayton	900	800
Orange	2,000	2,050
Orchard	2,200	2,300
Pettus	8,450	8,400
Pierce Junction	9,500	9,900
Port Neches	1,500	1,500
Raccoon Bend	8,750	8,900
Refugio	27,300	27,650
Saratoga	1,200	1,200
Somerville	1,550	1,200
Sour Lake	2,100	2,100
South Liberty	2,800	2,900
Spindle Top	13,600	13,900
Sugar Land	12,000	12,000
West Columbia	4,900	5,300
Others	2,200	2,250
Total	161,600	161,750
Texas Total	732,900	734,800

OKLAHOMA

Allen	12,250	13,150
Asher	900	800
Blackwell	2,350	2,300
Bowlegs	13,250	14,000
Braman	2,050	2,000
Bristow Slick	12,100	12,200
Burbank	13,650	14,050
Carr City	11,550	12,550
Cromwell	6,200	6,300
Cushing	12,100	12,150
Davenport	900	900
Duncan District	6,600	7,700
Earlsboro	16,650	20,900
East Earlsboro	16,800	18,150
East Little River	10,750	10,300
East Seminole	1,950	2,100
Fox	800	800
Garber	4,400	4,350
Graham	2,600	2,800
Healdton	10,000	10,300
Hewitt	5,400	5,500
Hubbard	1,050	1,050
Konowa	12,950	14,650
Little River	23,850	23,950
Logan County	3,150	3,100
Maud	3,000	3,200
Mission	7,050	7,400
North Okmulgee	9,300	9,400
Oklahoma City	92,800	73,350
Osage (outside Burbank)	24,450	24,500
Papoose	2,250	2,300
Pearson	500	500
St. Louis	21,550	23,300
Sasakwa	4,550	5,000
Scholem Alechem	9,200	9,350
Searight	6,250	6,800
Seminole	13,700	13,750
South Earlsboro	8,650	8,850
South Okmulgee	6,000	6,100
Thomas	400	400
Tonkawa	4,050	4,950
West Asher	13,750	13,050
Wewoka	4,800	4,400
Yale Jennings	5,400	5,500
Others	45,050	46,050
Total	486,950	484,200

CALIFORNIA

Dominguez	10,000	10,000
Elwood-Goleta	35,300	40,500
Huntington Beach	27,000	28,000
Inglewood	15,500	15,300
Kettleman Hills	26,000	25,700
Long Beach	96,000	98,000
Midway-Sunset	59,000	59,500
Playa Del Rey	42,000	40,300
Santa Fe Springs	94,000	93,400
Seal Beach	17,700	18,000
Ventura Avenue	48,400	46,500
Others	129,000	132,000
Total	599,900	607,200

KANSAS

Augusta-Fox Bush	2,650	2,700
Churchill	3,400	3,400
Eldorado-Towanda	13,650	13,800
Florence-Covert	950	950
Greenwood County	17,000	17,050
Oxford	2,350	2,400
Peabody-Ebling	2,300	2,300
Rainbow Bend	1,000	1,000
Russell	2,800	2,800
Sedgwick	24,000	24,400
Voshell	6,550	7,450
Others	31,000	31,000
Total	107,650	109,250

NORTH LOUISIANA

	Nov. 29	Nov. 22
Caddo Heavy	2,800	2,800
Caddo Light	8,600	8,550
Carterville	2,250	2,350
Cotton Valley	1,850	1,850
DeSoto-Red River	2,800	2,850
Haynesville	5,250	5,250
Holly	900	1,000
Homer	3,350	3,350
Urania	5,300	5,300
Zwolle	9,400	9,100
Others	1,700	1,700
Total North Louisiana	44,200	44,100

LOUISIANA GULF COAST

Bayou Boullion	150	150
East Hackberry	3,950	4,000
Edgerly	400	400
Evangeline	2,100	2,000
Hackberry	900	900
Lake Barre	2,200	2,200
Lockport	4,700	4,850
Port Barre	2,250	2,250
Sorrento	50	50
Sulphur Dome	2,900	3,200
Sweetlake	1,150	1,150
Vinton	5,400	5,250
White Castle	1,050	1,050
Others	2,150	2,050
Total Louisiana Gulf Coast	29,350	29,500
Louisiana Total	73,550	73,600

ARKANSAS

Champagnolle	3,450	3,450
El Dorado	3,900	3,900
Lisbon	900	900
Nevada	1,050	1,050
Smackover Heavy	35,700	35,750
Smackover Light	4,800	4,850
Stephens	900	900
Others	1,200	1,150
Total	51,900	51,950

MOUNTAIN STATES

WYOMING

Big Muddy	2,050	2,050
Elk Basin	700	650
Grass Creek	2,050	2,100
La Barge	1,450	1,800
Lance Creek	150	250
Lost Soldier	4,400	4,600
Oregon Basin	3,100	3,100
Rock River	2,150	2,150
Salt Creek	26,600	27,150
Others	3,650	4,000
Total	46,300	47,850

MONTANA

Cat Creek	1,150	1,150
Pondera	1,700	1,200
Sunburst	3,550	2,550
Others	50	50
Total	6,450	4,950

COLORADO

Florence	550	450
Fort Collins	1,150	1,200
Moffats (Craig)	1,150	1,150
Others	1,350	1,450
Total	4,200	4,250

NEW MEXICO

Artesia	750	750
Balance Lea County	6,600	5,700
Hobbs High	37,050	36,700
Hogback	450	450
Rattlesnake	1,000	1,150
Table Mesa	100	100
Eddy	150	200
Totals	46,100	45,050
Total Mountain States	103,050	102,100

EASTERN STATES

(Including Ill., Ird., Ohio, W. Va., Pa., Ky., N. Y.)	101,000	110,000
Michigan	9,000	8,750
Total Eastern States	110,000	118,750

PRODUCTION SUMMARY

East of Rockies	1,562,950	1,572,550
Total U. S.	2,265,900	2,281,850

MARKET SECTION

operators who are now producing less than enough oil to pay operating expenses. To obtain a smaller state output, it would be necessary to force reductions in fields now fully accepting the present curtailment schedule.

A balance between purchases and production and demands is also being considered, with probable relief in sight for companies which have been forced to purchase almost as much, or more, crude than they have produced.

Prairie Withdrawal Calls For New Proration in Oklahoma

WITHDRAWAL of Prairie Oil & Gas Company as a purchaser in the Seminole area and restriction of its purchases to one-third of previous runs in settled fields of Oklahoma and Kansas has forced the proration committee of the Mid-Continent Oil & Gas Association to revise its figures as to the market for Oklahoma crude oil for the remainder of the year.

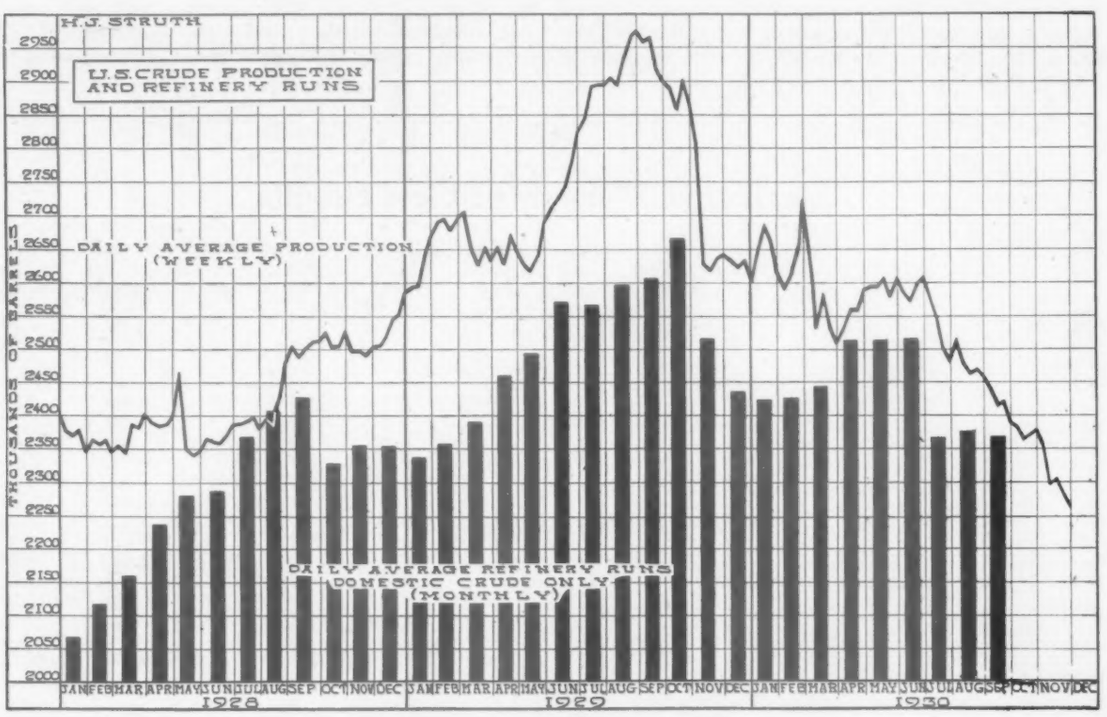
Following Prairie Oil & Gas Company's announcement Monday, members of this committee went into executive session but no report was prepared and the committee adjourned to meet later at the call of Alvin C. Richard, president of the Kansas-Oklahoma division of the association. There are many other factors to consider, other than the restriction of purchases by Prairie Oil & Gas Company, so it will take several days to compile figures on the crude market situation for Oklahoma. Some estimates are that the demand for Oklahoma crude oil will be in the neighborhood of 500,000 barrels daily, whereas 535,000 barrels previously had been set.

Announcement of the change in buying policy by Prairie Oil & Gas Company in Oklahoma and Kansas followed restrictions in Texas earlier. For the Greater Seminole area, producers to which this company has been connected have been asked to seek other connections. The company will buy only 1000 barrels daily from the Oklahoma City field. In the settled fields of the two states Prairie Oil & Gas Company has restricted its purchases to one-third of previous requirements.

Under the Oklahoma proration order now prevailing, leases with average daily output of five or fewer barrels daily are not subject to proration. Where the average well output is in excess of five barrels daily, only half the output above five barrels per day is run. Prairie Oil & Gas Company will take but one-third of the oil from leases under provisions of the proration order. Wells averaging less than five barrels will be reduced to one-third the maximum output. Where the average exceeds five barrels, the 50 per cent proration will be applied to the excess and then one-third the output taken.

Full effect of the restriction can not be measured until it is determined what amount of Prairie Oil & Gas Company connections in flush fields, such as Seminole and Oklahoma City are taken by other purchasers. Since most of the other major purchasers buy in these fields, changes will be determined solely by demand. But in the older fields of settled output the situation seems different. It is not likely that other purchasers will elect to provide gathering systems in these old areas when ample purchases can be made at less gathering cost in the new area of higher well average.

To offset restriction by the Prairie Oil & Gas Company, Ajax Pipe Line Company's line from Oklahoma to St. Louis is now ready to ship its first oil eastward. This



MARKET SECTION

Weekly Comparisons of Permits Granted for New Wells

	Week Ending November 29	Previous week	This week 1929	Total this Month	This month 1929	Total this year	Total this date last year	1929 year total
Arkansas	1	3	4	9	9	101	154	159
California	44	..	15	82	86	870	1,164	1,231
Louisiana	16	13	18	55	91	909	852	903
Kansas	10	15	18	59	87	911	1,022	1,079
Oklahoma	27	37	72	160	350	2,715	3,287	3,578
Texas	90	122	195	412	924	6,794	8,178	8,697
Total	188	190	322	777	1,547	12,300	14,657	15,647

double 10-inch carrier, equipped to transport 65,000 barrels daily, is owned by Standard Oil Company of New Jersey and Pure Oil Company. Tariffs indicate that deliveries, through the Ajax lines and other connecting systems, will deliver Oklahoma crude oil to Latonia, Kentucky, Toledo and Cleveland refineries of Standard Oil Company of Ohio; the Heath, Ohio, and Cabin Creek, West Virginia, plants of Pure Oil Company; the Parkersburg, West Virginia, plant of Standard Oil Company of New Jersey; and the Sarina, Ontario, refinery of the Imperial Refining Company.

The Ajax system starts at Glen Pool, Oklahoma, where it can have connection with the Oklahoma Pipe Line Company, another subsidiary of Standard Oil Company of New Jersey, the oil for Ajax delivery will be collected by the Oklahoma system, which is in the Greater Seminole area, Oklahoma City, as well as in some of the older pools of the central part of the state.

The 12-inch carrier of the Texas-Sinclair Pipe Line Company is under construction from Oklahoma City to Coffeyville, Kansas. Continental Oil Company will within 60 days complete a line from the Oklahoma City pool to connect with existing lines between Tonkawa and Ponca City.

In Kansas Prairie Oil & Gas Company last week withdrew as a purchaser in the Voshell pool, the outstanding flush area of that state. The move this week restricts the company's purchases to one-third of former takings in the settled areas. As in Oklahoma, many of the settled leases in Kansas will find difficulty in transferring connections to other concerns which would be required to lay lines to gather the oil. With oil from flush fields more than ample requirements, the settled fields have scant attraction for buyers.

Howard-Glasscock Producers Balk At Lower Prices for Crude

Introduction of a flat posted price of 50 cents per barrel for all grades of crude in the Howard-Glasscock County district by Cosden Oil Company, effective November 28, has met with opposition by producers. The latter countered by severing their pipe line connections with few exceptions, and indications are that Cosden Oil Company will be forced to resume paying the regular West Texas posted price if

(*Continued on page 89*)

Summarized Review of Field Results

State—	Completions This week.	Completions Last week.	Oil Wells This week.	Oil Wells Last week.	Gas Wells This week.	Gas Wells Last week.	Failures This week.	Failures Last week.	Initial Prod. This week.	Initial Prod. Last week.
Arkansas	2	1	1	1	..	..	1	..	15	100
California	20	21	19	19	..	..	1	2	7,085	14,560
Illinois	5	3	3	1	..	..	2	2	24	30
Indiana	..	17	..	7	..	4	..	6	...	161
Kansas	18	16	7	10	5	1	6	5	5,560	2,580
Kentucky	18	40	12	23	1	5	5	12	291	2,322
Louisiana	18	23	4	10	8	2	6	11	1,703	6,646
Michigan	14	11	5	3	1	1	8	7	750	450
Mississippi	2	1	..	..	1	1	1	..	...	...
New Mexico	2	2	2	2	..	..	..	..	12,375	21,158
New York	..	4	..	4	..	..	..	..	...	32
Ohio	58	37	10	18	26	9	22	10	120	182
Oklahoma	53	50	27	29	8	9	18	12	184,389	98,042
Pennsylvania	5	54	2	42	..	10	3	2	5	112
Texas	71	81	26	41	16	2	29	38	36,159	37,333
West Virginia	11	31	..	4	7	21	4	6	...	12
Total	297	392	118	214	73	65	106	113	248,476	183,720
Increase	..	..	..	..	8	..	..	..	64,755	...
Decrease	95	..	96	..	..	..	7	..	...	...

MARKET SECTION

Crude Oil Price Quotations

(Revised to December 2, 1930)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Nov. 13, 1930) $2.15

Penna. Grade Oil in National Transit Lines (Other Pennsylvania) (Effective, Nov. 13, 1930) 1.85

Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania) (Effective Nov. 13, 1930) 1.80

Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Nov. 13, 1930) 1.70

Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Nov. 13, 1930) 1.45

Wayne district crude in Cumberland lines (West Virginia) (Effective July 23, 1930) 1.17

Corning Grade in Buckeye Pipe Lines (Ohio) (Effective Oct. 28, 1930)..... 1.25

Somerset Oil in Cumberland Pipe Lines (Kentucky) (Effective July 23, 1930). 1.30

Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930) 1.14

Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929)... 0.60
*Oil run prior to July 1, 1929 is $2.10 per bbl.

(Posted by Stoll Oil Refining Company)

Oil City, Ky., oil in Stoll lines (Effective July 25, 1930) 1.35

MICHIGAN

(Posted by Dixie Oil Company)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, on gravity basis prior to reduction on Oct. 27, 1930.

(Posted by Pure Oil Company)

Midland, Midland County ,Aug. 21, 1930).$1.30

CENTRAL STATES FIELDS

(Posted by Ohio Oil Company)
(Effective Oct. 28, 1930)

Wooster	$1.35	Princeton	1.30
Lima	1.10	Illinois	1.30
Waterloo	1.20	Plymouth	.88
Indiana	.87	W. Kentucky	1.15

CANADIAN CRUDE

(Posted by Imperial Oil Refineries, Ltd.)
(Effective October 28, 1930)

Petrolia $1.50
Oil Springs 1.57

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co., and Stanolind Crude Oil Purchasing Company, Effective Nov. 1, 1930. Carter Oil Company Same Schedule Effective Oct. 28.

Below 29	$0.65	35-35.9	.92
29-29.9	.69	36-36.9	.95
30-30.9	.73	37-37.9	.98
31-31.9	.77	38-38.9	1.01
32-32.9	.81	39-39.9	1.04
33-33.9	.85	40 and above..	1.07
34-34.9	.89		

Magnolia Petroleum Company Effective October 28.

Below 26	.53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here to 40 and above gravity same schedule as above.

NORTH TEXAS

Posted by All Purchasers Except Magnolia Petroleum Company

Ranger, North Texas, Van, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran, and Nocona crudes:

Below 29	$ .65	35-35.9	.92
29-29.9	.69	36-36.9	.95
30-30.9	.73	37-37.9	.98
31-31.9	.77	38-38.9	1.01
32-32.9	.81	39-39.9	1.04
33-33.9	.85	40 and above..	1.07
34-34.9	.89		

Magnolia Petroleum Company, Effective October 28

Below 26	.53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here to 40 and above gravity same as schedule above.

PANHANDLE

Posted by All Purchasers, Effective Oct. 28, 1930

Gray County Crude

Below 29	$ .50	29-29.9	.54

(Continued on page 66)

Crude Oil Prices at the Well

San Francisco, Cali., September 12, 1930

Effective September 15, 1930, at 7:00 A. M. the following are the current prices offered by
STANDARD OIL COMPANY OF CALIFORNIA
For Crude Oil at the Well (Except Elwood Terrace as below).
Price Per Barrel in Fields Indicated

Gravity	Signal Hill	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Olinda-Brea Canou	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Gravity
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70			$ .70	$ .70	$ .70	$ .70	$ .70		$ .55	$ .55	$ .55	$ .55	$ .55	$ .55	14-14.9
15-15.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	15-15.9
16-16.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	16-16.9
17-17.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	17-17.9
18-18.9	.76	.76	.76	.76	.76	.76			.76	.76	.76	.71	.76		.55	.62	.62	.62	.62	.62	18-18.9
19-19.9	.82	.82	.82	.82	.82	.82			.82	.82	.82	.77	.82		.55	.70	.70	.70	.70	.70	19-19.9
20-20.9	.88	.88	.88	.88	.88	.88			.88	.88	.87	.83	.87			.78	.78	.78	.78	.78	20-20.9
21-21.9	.94	.94	.94	.94	.94	.94			.94	.94	.93	.90	.93	$ .92		.86	.86	.86	.86	.86	21-21.9
22-22.9	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	.98	.97	.98	.95		.94	.94	.94	.94	.94	22-22.9
23-23.9	1.07	1.07	1.07	1.07	1.07	1.07			1.07	1.07		1.05	1.04	1.01		1.02	1.02	1.02	1.02	1.02	23-23.9
24-24.9	1.12	1.12	1.12	1.12	1.12	1.12	$1.12		1.12	1.12		1.08	1.08	1.05		1.06	1.06	1.06	1.04	1.04	24-24.9
25-25.9	1.17	1.17	1.17	1.17	1.17	1.17	1.17		1.17	1.17		1.11	1.12	1.09		1.10	1.10	1.10	1.06	1.06	25-25.9
26-26.9	1.22	1.22	1.22	1.22	1.22	1.22	1.22		1.22	1.22		1.15	1.16	1.13		1.14	1.14	1.14	1.08	1.08	26-26.9
27-27.9	1.26	1.26	1.26	1.26	1.26	1.26	1.27		1.26	1.26		1.19	1.21	1.18		1.18	1.18	1.18	1.11	1.10	27-27.9
28-28.9	1.30	1.30	1.30	1.30	1.30	1.30	1.32		1.30	1.30		1.23	1.25	1.23		1.23	1.23	1.23	1.15		28-28.9
29-29.9	1.34	1.34	1.34	1.34		1.34	1.37			1.34		1.26	1.29	1.28		1.29	1.29	1.29	1.19		29-29.9
30-30.9	1.38	1.38	1.38	1.38		1.38	1.42			1.38		1.29	1.33	1.33		1.35	1.35	1.35	1.23		30-30.9
31-31.9	1.43	1.43	1.43	1.43		1.43	1.43	F. O. B. Ship						1.38		1.41	1.41	1.41	1.27		31-31.9
32-32.9	1.48	1.48	1.48	1.48			1.52							1.43		1.47	1.47	1.47	1.31		32-32.9
33-33.9							1.57							1.48		1.53	1.53	1.53	1.35		33-33.9
34-34.9							1.62	$1.32						1.53				1.59	1.39		34-34.9
35-35.9							1.66	1.39						1.58				1.65	1.43		35-35.9
36-36.9							1.72	1.46						1.63							36-36.9
37-37.9							1.78	1.53						1.68							37-37.9
38-38.9							1.84	1.60						1.73							38-38.9
39-39.9							1.90	1.66						1.78							39-39.9
40-40.9							1.96	1.72													40-40.9
41-41.9							2.02	1.78													41-41.9
42-42.9							2.08	1.84													42-42.9

KETTLEMAN HILLS*	
35-39.9	$1.10
40-44.9	1.20
45-45.9	1.35
50-54.9	1.50
55 and above	1.65

*Posted by Union Oil Company.

MARKET SECTION

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 65*)

30-30.9	.58	36-36.9	.80
31-31.9	.62	37-37.9	.83
32-32.9	.66	38-38.9	.86
33-33.9	.70	39-39.9	.89
34-34.9	.74	40 and above	.92
35-35.9	.77		

Carson and Hutchinson County Crudes

Below 29	$ .45	35-35.9	.72
29-29.9	.49	36-36.9	.75
30-30.9	.53	37-37.9	.78
31-31.9	.57	38-38.9	.81
32-32.9	.61	39-39.9	.84
33-33.9	.65	40 and above	.87
34-34.9	.69		

WEST TEXAS

Posted by All Purchasers, Effective October 28, 1930

Winkler and Pecos County Crudes:

Below 25	$ .55	31-31.9	.69
25-25.9	.57	32-32.9	.71
26-26.9	.59	33-33.9	.73
27-27.9	.61	34-34.9	.75
28-28.9	.63	35-35.9	.77
29-29.9	.65	36 and above	.79
30-30.9	.67		

Crane, Upton, Crockett, Ector, Ward, Loving, Mitchell,* Howard, and Glasscock Counties, Texas, and Lea County, New Mexico crudes

Posted by All Purchasers, Effective Oct. 28, 1930

Below 25	$ .50	31-31.9	.64
25-25.9	.52	32-32.9	.66
26-26.9	.54	33-33.9	.68
27-27.9	.56	34-34.9	.70
28-28.9	.58	35-35.9	.72
29-29.9	.60	36 and above	.74
30-30.9	.62		

*Magnolia Petroleum Company uses Gravity scale and Coltex Refining Company pays flat price of 60 cents for Mitchell County.

GULF COAST

(Posted by Humble Oil & Refining Company, The Texas Company and Sun Company)

Gulf Coast Crude will be classified as follows in fields designated below:

Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:

"A" GRADE—All crudes conforming to the following tests:

Viscosity—Not less than 100 seconds at 100° F. Saybolt.

Sulphur—Not over .4%.

Beaume Gravity—Not over 25 at 60° F.

Cold test of distillates having a viscosity of 1000 seconds at 100° F, shall not be over 5° F.

"A" GRADE—$1.00.

"B" GRADE—Embraces all Coastal crude which does not meet the test for "A" grade crude:

Below 25	$ .75	26-26.9	.94
25-25.9	.92	27-27.9	.96
28-28.9	.98	34-34.9	1.10
29-29.9	1.00	35-35.9	1.12
30-30.9	1.02	36-36.9	1.14
31-31.9	1.04	37-37.9	1.16
32-32.9	1.06	38-38.9	1.18
33-33.9	1.08	39-39.9	1.20
		40 and above	1.22

Markham (The Texas Company) ..... .75

Posted by Gulf Pipe Line Company, Effective October 30, 1930

High Island	$ .75		
Grade "A"	.80		
Grade "B"			
Below 25	$ .69	33-33.9	.87
25-25.9	.71	34-34.9	.89
26-26.9	.73	35-35.9	.91
27-27.9	.75	36-36.9	.93
28-28.9	.77	37-37.9	.95
29-29.9	.79	38-38.9	.97
30-30.9	.81	39-39.9	.99
31-31.9	.83	40 and above	1.01
32-32.9	.85		
Jennings, La.	.80		

SOUTHWEST TEXAS

Posted by All Purchasers, Effective Oct. 28, 1930

Refugio Heavy crude, below 25 gravity.. .75
Refugio Light crude:

25-25.9	$ .92	33-33.9	1.08
26-26.9	.94	34-34.9	1.10
27-27.9	.96	35-35.9	1.12
28-28.9	.98	36-36.9	1.14
29-29.9	1.00	37-37.9	1.16
30-30.9	1.02	38-38.9	1.18
31-31.9	1.04	39-39.9	1.20
32-32.9	1.06	40 and above	1.22

Mirando crude	$. 75
Salt Flat crude	.90
Darst Creek crude	.90
Pettus crude	1.10
Luling	.75
Corsicana, heavy	.75

Determination of quality, deductions, adjustment for temperature, etc., on oil purchased in Texas, shall be in accordance with the rules and regulations of the Texas Railroad Commission, and on oil purchased in New Mexico shall be in accordance with the rules and regulations of the Corporation Commission of New Mexico.

LOUISIANA-ARKANSAS

All Purchasers Except Magnolia Petroleum Co., Effective Oct. 29, 1930

Pine Island District, Haynesville District, Bull Bayou District, El Dorado District, Rainbow District, Cotton Valley

Below 29	$ .65	37 to 37.9	.98
29 to 29.9	.69	38 to 38.9	1.01
30 to 30.9	.73	39 to 39.9	1.04
31 to 31.9	.77	40 to 40.9	1.07
32 to 32.9	.81	41 to 41.9	1.10
33 to 33.9	.85	42 to 42.9	1.13
34 to 34.9	.89	43 to 43.9	1.16
35 to 35.9	.92	44 and above	1.19
36 to 36.9	.95		

Urania, La.	.75
Bellevue, La.	1.00

Magnolia Petroleum Company, Effective October 30, 1930

Below 26	$ .53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here prices same as schedule above.

STEPHENS

Below 29	$ .54	31 to 31.9	.66
29 to 29.9	.58	32 and above	.70
30 to 30.9	.62		
Smackover	.70		
El Dorado, East Field	.70		

ROCKY MOUNTAIN FIELDS

(Salt Creek prices effective April 10, 1930)

‡Salt Creek 29-29.9	$1.00
" " 30-30.9	1.05
" " 31-31.9	1.10
" " 32-32.9	1.15
" " 33-33.9	1.185
" " 34-34.9	1.22
" " 35-35.9	1.255
" " 36-36.9	1.29
" " 37 and above	1.325
Elk Basin (Effective Oct. 28, 1930)	1.25
Grass Creek light	1.25
Big Muddy	1.00
Lance Creek	1.33
Rock Creek	1.01
Mule Creek	1.20
Rex Lake	1.10
‡Osage	1.25
‡Cat Creek, Montana	1.55
Pondera	1.45
Sunburst, Montana	1.55
‡Hogback, New Mexico	1.40
Artesia, New Mexico	.75

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

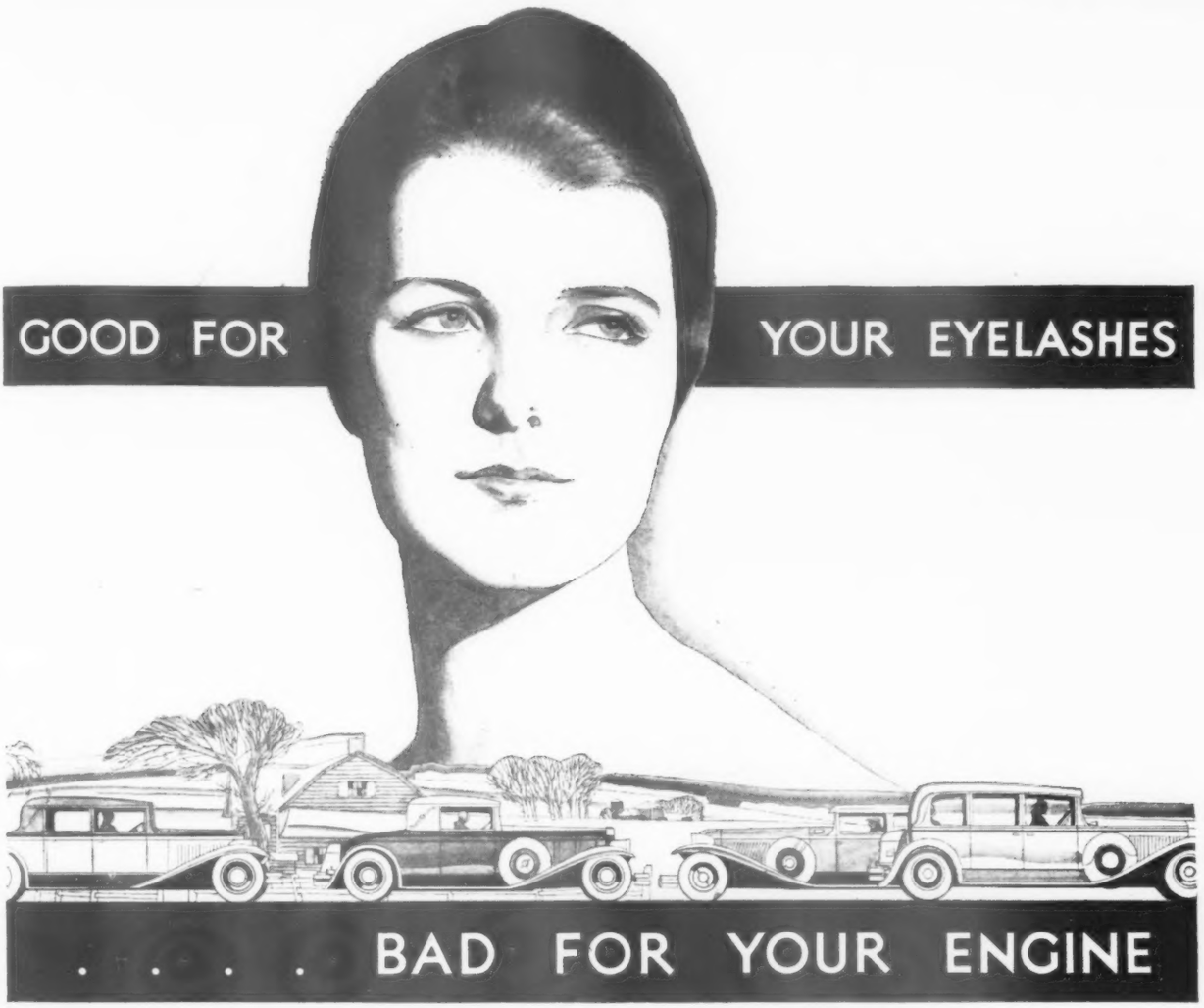
Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

Frank D. Williams of Oil City, Pennsylvania, former president of National Transit Pump & Machine Company, has been in Houston for two days, leaving Wednesday for San Antonio, on his way to California. Mr. Williams retired from active business on November 1, and with his family is traveling by auto across the continent. They anticipate returning East in the spring.

E. B. Smith, field representative of the Bradford Motor Works, who has been covering the Wichita Falls, Texas, district, has been transferred to Tulsa.



PETROLEUM JELLY . . . a familiar friend in every household . . . is the same sticky salve that makes motor oils thick and sluggish in winter.

The great Sinclair refineries, with modern refrigerators and separators, remove this paralyzing petroleum jelly from Sinclair Opaline at as low as 60° F. below zero. (Opaline is guaranteed to flow at zero.) With Opaline your customers are not forced to change to "light" motor oils for easy starting in winter!

Opaline is refined from paraffin base crudes according to the Sinclair Law of Lubrication. (Write for booklet explaining this famous Sinclair Law . . . it's a sensational sales builder you shouldn't overlook!)

This is the story and above is the girl who'll carry it into millions of homes from coast to coast. Cash in on the sweeping Opaline sales.

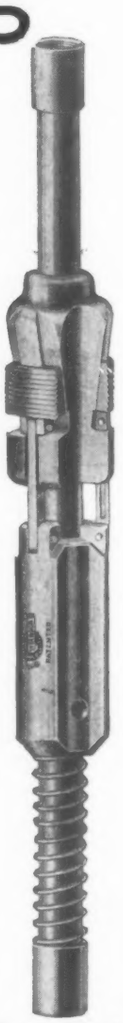
* * *

Send a post card to our nearest office and a Sinclair salesman will tell you all about it. Sinclair Refining Company (Inc.), New York, Atlanta, Chicago, Fort Worth, Houston, Kansas City. Sinclair Refining Company of Canada, Ltd., Toronto. Sinclair Refining Company of California, Los Angeles.

SINCLAIR OPALINE
REG. U. S. PAT. OFF.
MOTOR OIL

KEEP THIS SLEDGE HAMMER AWAY FROM YOUR TUBING

One crack at your tubing from this big fellow will turn it into a mass of twisted junk, probably bottling up your production and handing you a bill for labor and materials to put your well back in shape. You had better avoid this pile driver as you would a falling tree. The Guiberson Tubing Catcher will stop a string of falling tubing within three inches. This it will do without the aid of fluid in the hole, due to the strong spring, and despite the retarding action of mud or paraffin, due to the heavy striker weight. A properly aligned grip is assured at all times by dove-tail tracks which guide the slips instantly and accurately to the casing walls. Attach a Guiberson Catcher to the bottom of your tubing and rid yourself of the worry over what "might happen." *Fully patented.*



"Better Be Safe Than Sorry"
THE GUIBERSON CORP.
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave., Los Angeles
621 Kennedy Bldg. Tulsa | 221 S. Osage St. Ponca City | 506 Trust Bldg. Newark, O.

GUIBERSON
BETTER BE SAFE THAN SORRY

PERSONAL MENTION-MEN YOU KNOW

Burr McWhirt, valuation engineer in the geological department of the Shell Petroleum Corporation, has been transferred from the northern division office at Tulsa to the Gulf Coast division at Houston, effective November 15, 1930.

William B. McCormick, aged 60, a pioneer operator in the Pine Island oil field of Caddo Parish, Louisiana, and in the Monroe, Louisiana, gas field, died at his home in Shreveport November 26 after an extended illness. Funeral rites were held in Shreveport. Surviving are the widow, two sisters, and other relatives.

P. A. Jerguson, president of Jerguson Gauge and Valve Company, Somerville, Massachusetts, left December 3 for an extended European vacation. On arrival in Paris he will be joined by his wife and daughter, where Miss Jerguson has been studying. The vacation trip will include England, France, Germany and the Balkan states.

A. M. Cullum has resigned as oil country sales manager of Reading Iron Company with headquarters at Tulsa, effective December 1. He has been associated with Reading Iron Company for the past 10 years, starting as a clerk at the Roe Puddling Plant. He will take up a position with the Harbison and Walker Refractories Company, Pittsburgh.

A. L. Fritchey, for many years a national representative of Pittsburgh Equitable Meter Company, handling its entire line of gas meters, water meters and pressure regulating equipment, has been placed in charge of a new territory established in the Northwest, with headquarters at Davenport, Iowa.

E. M. Gretzler, manager of National Supply Company in Roumania, is visiting California.

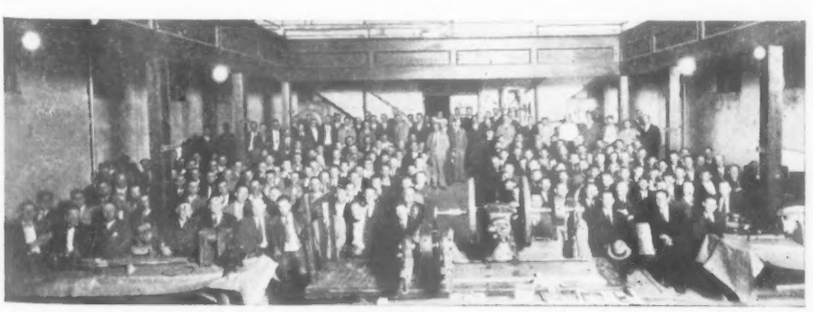
H. P. Evans, president of Tex Cal Oil Company, Brownwood, Texas, visited in Houston the early part of this week. His company has production in Brown County, Texas.

C. F. Meyer, president, A. F. Corwin, vice-president, and S. F. Fales, Frederic Ewing and W. H. Correa, officials of Standard Oil Company of New York, are on an extended business trip to California fields.

R. W. Thompson, in addition to his duties as advertising manager, manager of cut nail sales and manager of sales for the Stoyestown coal mine, a soft coal property owned and operated by the Reading Iron Company, has been appointed director of public relations. Mr. Thompson will assume his duties immediately.

Harold S. Bard has been appointed district sales representative of Reading Iron Company with offices at 1714 Engineering Building, Chicago, to succeed Mr. R. A. Griffin resigned. Mr. Bard has been associated with the Reading Iron Company for the past seven years in the capacity of salesman with headquarters in the New York district.

James R. Craun, formerly in the scouting department of Carter Oil Company, died Sunday night, November 30, at his home in Pawhuska. He was one of the oldest scouts in the Mid-Continent. Mr. Craun first entered the oil industry as a pump station engineer and telegraph operator for Buckeye Pipe Line Company in 1891, in the Cygnet and North Baltimore fields. In 1905 he was transferred to Independence, Kansas, as a gauger for Prairie Oil & Gas Company, and remained in this position covering fields of Chatauqua County, Kansas, until 1911, when he was transferred to the Avant district in the Osage country. In 1915 to 1917 he was assistant superintendent of production for Barnsdall Oil Company in that district, after which time he returned to Carter Oil Company. From that date until the latter part of 1929, when he was retired under the Carter Oil Company's retirement plan, he scouted the fields of the northeastern part of the state, where he acquired an enviable reputation in his branch of the profession.



Drumright A. P. I. Chapter in Session

Drumright Chapter Has Record Meeting

Drumright, Okla.—The Drumright Chapter, A. P. I., division of production, an organization which is accustomed to large attendance, eclipsed its former record on the night of November 18, when 262 members and guests heard an interesting talk on four-stroke cycle gas engines and engine alignment. D. O. Barrett, designing engineer for Gypsy Oil Company, was the principal speaker of the evening and instead of giving a talk on the principles and theories of gas engines, created a regular work shop in the chapter room and demonstrated his method of "misaligning" crank shafts with outer bearings. Mr. Barrett pointed out that the new method, instead of being a condition of perfect alignment of the crank shaft with the outer bearing on the assumption that the crank shaft is straight, was one of determining the bend in the shaft due to belt pull and setting the outer bearing to conform to the bending.

Special exhibits were provided by Oil Country Specialties Manufacturing Company, Happy Belting Company, Clark Brothers Company, Weber Engine Company, Superior Engine Company, Cooper-Bessemer Corporation, Titusville Iron Works, Wico Electric Company, Robert Bosch Magneto Company, and Marshall Supply Company. Among the equipment on special exhibition were a chain drive drilling machine and pumping unit, by the O. C. S. Company, belt tightening method by Happy Belting Company, and a new type magneto by Robert Bosch Magneto Company. All of the above named manufacturers and distributors co-operated with Mr. Barrett and the Drumright Chapter in making the program and exhibit a success.

The next meeting will be held in the Chapter room at Drumright, Tuesday, December 16, at which time the nominating committee, including W. H. Bettis, W. H. Danforth, and L. A. Cook, will report nominations for the election of officers for 1931. The annual banquet will be held at 7 p.m., in connection with this meeting. E. B. Reeser, president of the American Petroleum Institute, has been asked to speak.

Houston.—Houston Oil Company has set casing in Comstock 1, located east of the Agua Dulce gas field, western Nueces County. On a 2½ minute drill stem test the well showed 250 pounds gas pressure, and a small amount of light oil, greenish in color, was trapped in the drill stem. The test was made in a sand logged from 4908 to 4918 feet. No water was shown.

Bureau of Mines Reports Results Of Year's Research

WASHINGTON, D. C.—Petroleum investigations of the Bureau of Mines during the past year are outlined in the annual report of Director Scott Turner, just submitted to Secretary of Commerce Lamont. The bureau is engaged in a vast number of studies of various problems of the production of petroleum, the results of the most outstanding of which are summarized, as follows:

Engineers of the bureau have turned their attention to a study of the Oklahoma City pool, where studies are being made jointly by the petroleum experiment station at Bartlesville, in cooperation with the State of Oklahoma, and by the Dallas field office. In addition, the Dallas office is studying fields in Louisiana and the prolific limestone formations of western Texas.

An engineering report covering the results of a study of the Salt Flat field, Texas, has been prepared. This investigation was made for the purpose of studying the subsurface conditions in a fault-line reservoir.

The study of water encroachment and remedial measures in the Roberts-Settles field, Texas, was begun at the request of the Texas Railroad Commission, and in cooperation with engineers representing companies operating in this field. The report on this field will supplement a study of fields in western Texas where data are being collected and compiled with special reference to the controlled operations and their effect upon oil recovery and water conditions in the Yates field.

A study of the Zwolle (Louisiana) field has been begun. This investigation was started to outline subsurface conditions, study structural features and conditions controlling the accumulation of oil in a chalk or limestone reservoir, and obtain information on development methods and production practices.

Data have been collected in all representative fields of the United States on the subject of handling producing oil wells. A bulletin, supplementing an earlier publication, is in final preparation, which will give detailed descriptions of methods and equipment used in the production of oil.

In connection with its studies of production methods which should help increase the recovery of oil from reservoir sands, bureau engineers are investigating air-gas-lift methods of flowing oil wells in various parts of the country. A study of the gas-lift methods used by California operators has been completed, and a bulletin has been prepared.

Seminole Report

In its report on the Seminole area, the bureau discusses not only air-gas-lift equipment and the methods of its application to wells in that area but also the effect of the lift on the gravity of the oil and the effect on oil production. It was found that the air-gas-lift was responsible for a sustained high rate of oil production. In the later stages of lift application when the daily average production of oil became low, the intermittent injection of air or gas was general. A survey of well-production records indicates that intermittent flow has increased the daily production of many wells in the Seminole area and that the rate of production decline in many other wells was arrested.

One of the basic factors in many petroleum engineering problems, including vertical flow and oil recovery, is the solubility of gas in oil. In 1926 the bureau published the results of a laboratory study on the solubility and effects of natural gas and air in crude oils. Later work, in which pressures up to and including 1000 pounds per square inch were used, also showed the straight-line relationship. More recently it was found that as selected gases, such as propane, approached their critical temperatures and pressures they were soluble in crude oil in all proportions.

Since the oil-gas solutions found in the virgin producing horizons contain gases ranging from dry gas to heavy vapors, it is desirable to obtain solubility data on these mixtures, as found in nature. Many wells in the Oklahoma City field, in which the oil and gas are produced from the same horizon, have initial pressures of more than 2000 pounds per square inch. Samples have been obtained at high pressures from these wells, and the amount of gas given off by these mixtures has been measured. By proper interpretation, these data indicate the amount of gas in solution in the oil as found in the producing horizon. Preliminary tests indicate that the relationship is not represented by a straight line, but in the virgin producing horizons as a gas approaches its critical temperature and pressure it becomes more soluble in the crude oil. Samples are also being obtained from wells in California and other producing areas. As soon as the data are analyzed, a report will be published.

The oil-recovery laboratory at the bureau's petroleum experiment station, Bartlesville, Oklahoma, continued its study of the fundamental principles and relationships involved in the various methods of increasing the recovery of oil from depleted fields. This work includes tests under controlled conditions to determine merits of the different methods of operation and repressuring media. The experimental data do not afford a quantative analysis in so far as field operations are concerned, but they do give some idea concerning the effect of the physical properties of the gases, when used as repressuring media in the recovery of oil. Furthermore, the comparative results brought out by the laboratory experiments should hold true to a certain extent in the field, and should aid the development of new methods by which a larger proportion of the oil left underground by ordinary oil-field operations may be profitably recovered.

Flow-tube Experiments

The series of flow-tube experiments started two years ago was brought to completion, results derived from a number of the previous runs being confirmed. In this series of runs, propane, air, dry natural gas, a mixture of dry gas and propane, and helium were used. Helium, because it is almost insoluble in oil and has a specific gravity much less than air, was used in an effort to verify certain relationships indicated by the other media.

Another study in the oil-recovery laboratory deals with the flow of oil and gas through sands. Special attention is being paid to the effects of pressure, temperature, and the dissolved gases. As was to be expected, the preliminary experiments with gas flow through sands show a certain amount of slippage along the walls of the flow tubes, and this increases in importance with an increase in size of sand grains.

The same apparatus, under the same conditions, will be used in the study of the flow of oil through sands. As part of this investigation, a study is being made of methods to determine capillarity, viscosity, and specific gravity of oil under high pressures.

Where air is used as a repressuring medium, the operator is confronted with the possible effect of oxygen in the air in causing chemical and physical changes in crude oil, which may make the removal of the oil from the sand more difficult or decrease the commercial value of the oil.

To help in solving these problems, the oil-recovery laboratory at Bartlesville has been engaged for more than a year in a study of the effect on crude petroleum of the use of air in repressuring oil fields. Tests are now being made with oxygen to accelerate possible reactions and obtain additional data.

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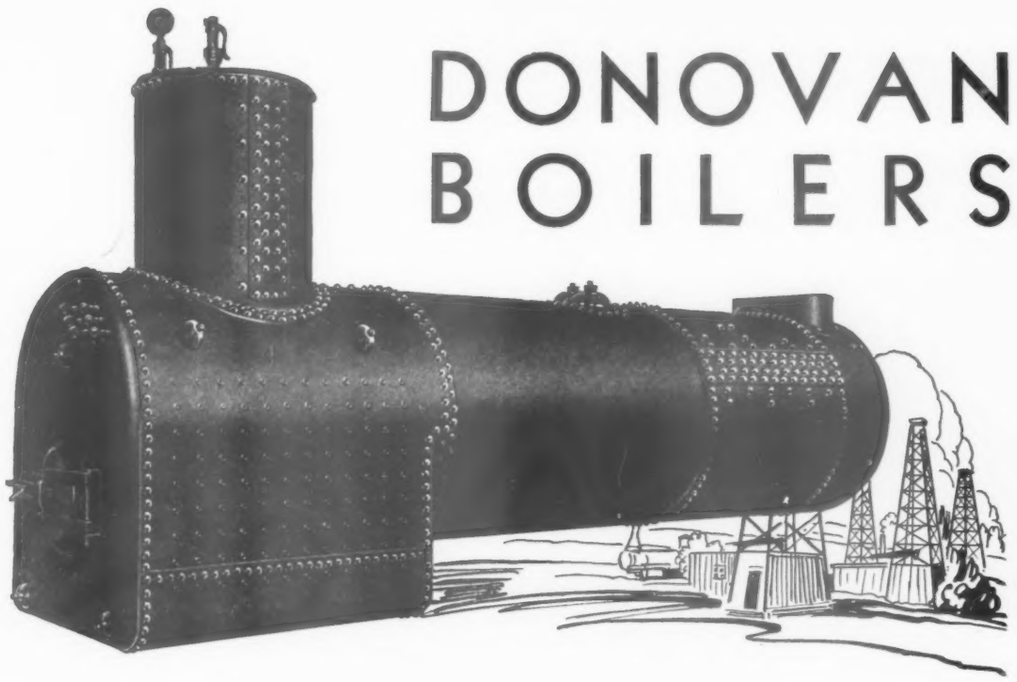

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Donovan is one of the fine old names in the oil country supply business. It stands for experience, integrity, responsibility, craftsmanship. On a boiler it means extremely long life, low fuel bills, and always plenty of dry steam even in the face of the emergency demands of deep drilling. Donovan Boilers are simple, efficient, safe. And they are CONSISTENTLY good. You will do well to investigate Donovan Boilers. Call any Frick-Reid Store or write our Tulsa Office.

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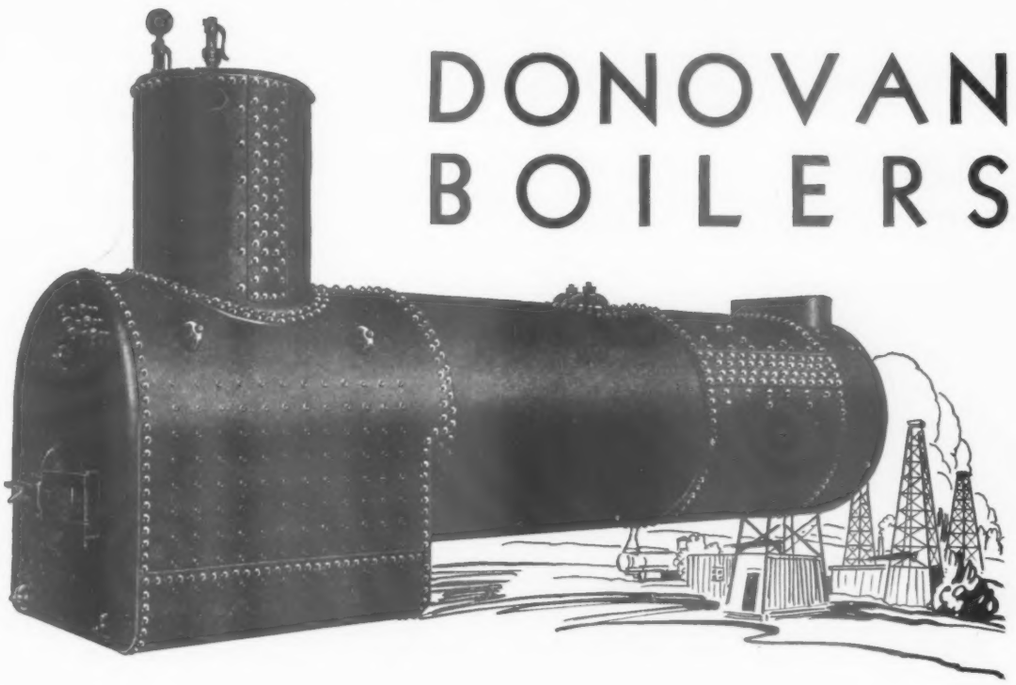

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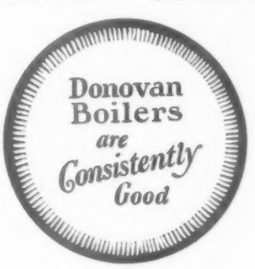
Donovan is one of the fine old names in the oil country supply business. It stands for experience, integrity, responsibility, craftsmanship. On a boiler it means extremely long life, low fuel bills, and always plenty of dry steam even in the face of the emergency demands of deep drilling. Donovan Boilers are simple, efficient, safe. And they are CONSISTENTLY good. You will do well to investigate Donovan Boilers. Call any Frick-Reid Store or write our Tulsa Office.



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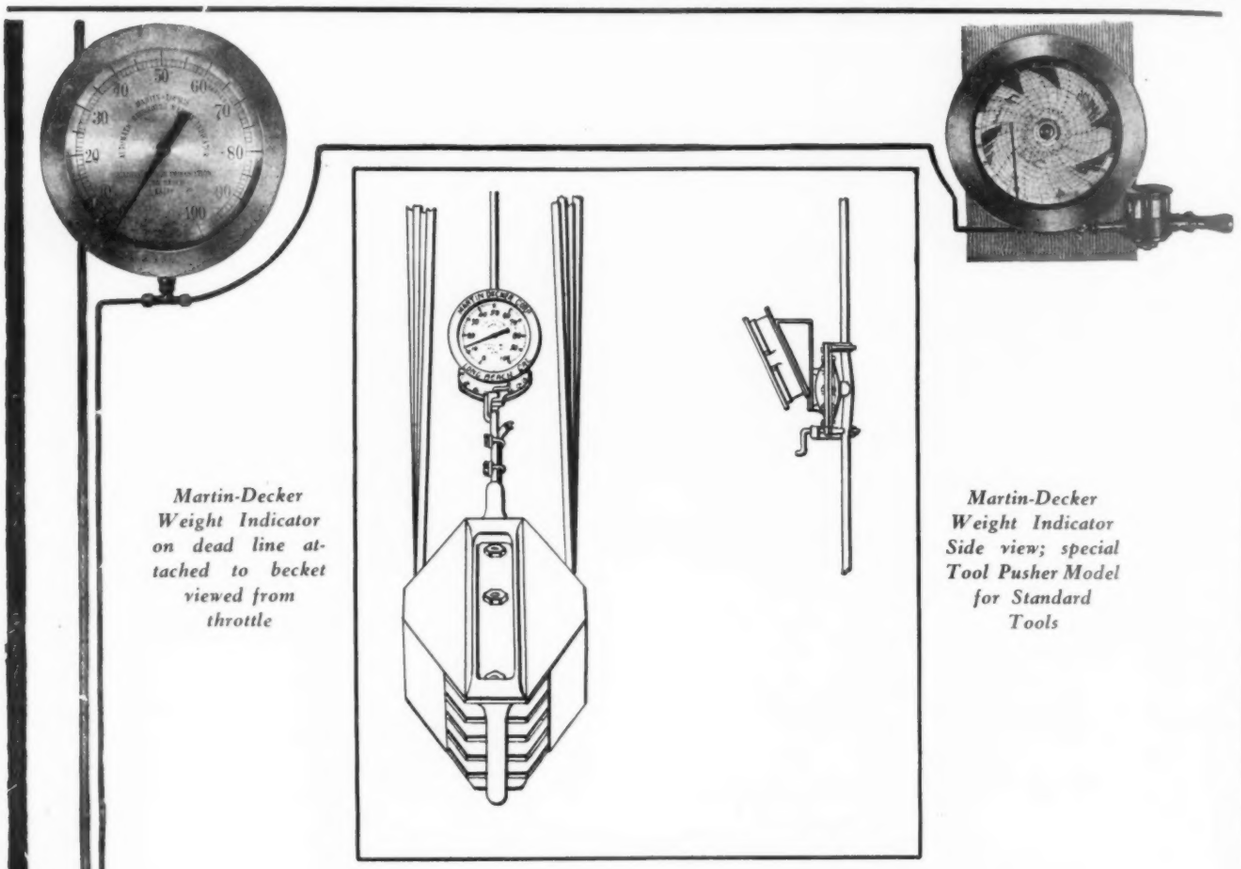
MARTIN-DECKER AUTOMATIC RECORDING WEIGHT INDICATOR



Martin-Decker Weight Indicator on dead line attached to becket viewed from throttle

Martin-Decker Weight Indicator Side view; special Tool Pusher Model for Standard Tools

A Suggestion to Users of CABLE TOOLS

We have been asked from time to time for a Weight Indicator that can be used with cable tools. The Martin-Decker Weight Indicator as manufactured for rotary use IS adaptable to use with cable tools for handling pipe.

A portable, self-contained Tool-pusher placed on the line attached to the becket of the blocks, as illustrated in the accompanying drawing, can easily be read from the driller's position, and is being used by a great number of operators of cable tools to show the strain on the derrick and the pull on the casing.

The use of this instrument will lessen the possibility of parted and frozen pipe and pulled-in derricks to a minimum.

Where a chart record is desired, showing just when pipe is being moved and what the pull has been, we suggest the regular rotary hook-up, stringing a dead line to the corner of the derrick.

We shall be glad to have you write for complete information.

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WEIGHT RECORDING, MEASUREMENT AND CONTROL

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

Peak Production Thought to Be Reached at Playa del Rey

LOS ANGELES.—The chances are better than even that peak production has been reached at Playa del Rey. If a higher output is recorded, certainly not more than 45,000 barrels daily should be produced during a full weekly period. A large number of completions were required weekly to send production to 40,000 barrels and a survey of the field indicates a downward trend unless a series of good wells comes to the rescue. It was only through the intense townlot activity that the field was able to make such a showing, and since the structure has been well defined there is evidence that the area has very definite limitations.

The axis of the structure runs roughly east and west, bearing toward the north from the southeast end. Development to the present time gives the townlot district about one-fourth of the total area, Union Oil Company almost one-half, and Ohio Oil Company around one-fourth. Subsequent drilling may change these percentages, but the latest contour map shows about such a distribution of acreage. The townlot activity is confined to the northwest and well drilled nearest to the ocean show a very favorable condition for some distance beyond the mean high tide line. It is possible that the townlot development is somewhere near the top of the structure, but the Pacific Ocean definitely limits operations.

The discovery well drilled by Ohio Oil Company was located on the north flank of the structure, although it was one of the best deep zone completions. The formations plunge more sharply than at Torrance but are fairly flat near the apex. Union Oil Company is entrenched with a large acreage on the east side but will develop its holdings conservatively. Necessary offsets will account for many wells, however. Ohio Oil Company has fairly well defined its holdings and will drill only necessary offsets. The townlot activity will continue at a rapid pace until it subsides from its own weight.

Early estimates were based on the assumption that only one producing zone would be developed. The shallow zone, found between 3400 feet and 4500 feet, has become the better of the two sands. The deep zone is still a factor and may account for a larger share of the total after the shallow sand has run its course.

The average initial production of completions has been smaller during the past two weeks than during the similar previous period. A good average for a dozen recent completions was 500 barrels, with two or three wells flowing above 1000 barrels each. With such a small initial flow, it seems only a matter of time until the decline will greatly exceed new production. Not one outstanding completion has been recorded, the field owing its present position to quantity rather than the size of new wells. Only a few wells are flowing in excess of 1000 barrels and the field can not boast a 2000-barrel producer.

The best wells are being completed outside the townlot district. The gas pressure is noticeably lower in the heavily developed section, although the shallow zone has shown a tendency to decline slowly because of the original low pressure.

Operators fear the risk of drilling to the 6000-foot level and are content to stop in the shallow zone. With good luck, good equipment and good crews, several good wells have been finished in the deep zone. This sand is far from uniform, both in thickness and productivity. It lies on the schist beds and ends abruptly. The plunging sides of the structure have accounted for better producers than several of the inside tracts.

Deep Zone Has 25 Wells

Of the 103 drilling wells, around 35 will be tested in the deep zone and the remainder in the shallow sand; 20 wells are idle and this division of projects probably will be increased from time to time. The total number of producing wells is 95, of which 60 were completed in the shallow zone and 35 in the deep sand. Average production does not exceed 400 barrels.

A gradual increase in the amount of shallow zone included below the final shutoff has been observed. The first completions were satisfied with less than 300 feet of sand and shale, but 1000 feet is not now uncommon. Pacific Shore Oil Company recently succeeded in completing No. 2 in both the shallow and deep zone—the first well to produce from both zones at the same time. Initial production was 1200 barrels of clean oil and the precedent may result in the inclusion of an enormous thickness of sand and shale below the top of the upper zone. A nine-inch water string was cemented at 3590 feet. The casing program was one of the most interesting ever carried out in the Los Angeles basin. About 2100 feet of 6⅝-inch liner was run, including 30 feet of blank pipe on top, 722 feet of perforated, 200 feet of blank, and 1165 feet of perforated. The liner was landed on bottom at 5657 feet and cemented through perforations at 4500 feet. Although the initial production was not unusually high, the fact that a completion was effected in both the upper and lower zones is important. Several streaks of questionable sand were cored, but they proved to be free from water.

Development of the Playa del Rey field is in some ways paralleling that of Torrance. Both fields are along what might be termed a common line, both are low pressure areas and the Pacific Ocean seems to shut off possibility of a greater producing acreage. Torrance was the most expensive field ever drilled in the Los Angeles basin—at least as far as the toll of operators was concerned. It is too early to predict what percentage of operators will play a losing game at Playa del Rey, but the late arrivals and one-well syndicates have factors working against them which they do not anticipate.

The cost of drilling varies from $50,000 to $100,000, depending upon the various factors which are prevalent in any field. It is costing less per foot to drill at Playa del Rey than in any Los Angeles basin field since the beginning of townlot development. Both labor and materials are more plentiful than ever before, and it must be admitted that the small operator who has not participated previously in field development is a close purchaser. Much old equipment is being used. During the height of development at Long

Beach and Santa Fe Springs, all thought of costs was cast aside and the best of everything used. The depression has resulted in a careful plan of procedure at Playa del Rey and the total cost of many wells is less than the value of casing used in various deep wells at Santa Fe Springs.

An analysis of individual completions makes the average outside operator wonder why drilling continues at such a

Shell Oil Company's Porter-Day 1, discovery well in the new Weed Patch field, near Bakersfield, California

rapid pace. The best well of the week came in with an initial flow of less than 1000 barrels. Of the 11 completions, nine were finished in the shallow zone, one included both the upper and lower sands and one ventured to the deep zone. Drilling to the shallower zone has been rapid, with a conductor string at about 750 feet and a large shutoff string over the sand at some level around 3500 feet. Deep completions include only a fraction of the amount of zone used by the shallow producers. The best completions have been finished in areas with few producers.

During a normal period in the oil industry, the Playa del Rey field would command only passing attention. Never has such a small field received such wide comment. This is chiefly due to the fact that production here represents just about the excess which prevents the state from remaining on an even keel. Yielding a heavy oil and only a limited amount of that, it is chiefly because of overproduction in the past and necessity for a small state output that keeps the field in the limelight.

North Dome Well's Flow Increases

Coalinga, Calif.—Superior Oil Company's Huffman 1, completed several weeks ago on the northwest flank of the North Dome at Kettleman Hills with an initial production of about 12,000 barrels of 40 gravity oil, has increased its flow to around 15,000 barrels. Gas production has not increased, the gas-oil ratio of this producer now being on a par with large wells in less sensational fields. Huffman 1 is producing more than one-half of the field total, exceeding the combined output of seven remaining wells.

Weed Patch Discovery Revives Kern County Lease Activity

Barkersfield, Calif.—Discovery of a new medium gravity oil field in the Weed Patch district, eight miles southeast of Bakersfield and a few miles south of Edison, has revived leasing activity in this part of Kern County and may lead to increased wildcatting operations in the bed of the San Joaquin valley.

Shell Oil Company, discoverer of the new field, promptly killed the original producer after it flowed for a few days at an 1100-barrel rate, and is now drilling ahead at 6060 feet in search of more producing zone, or another producing sand, whichever the case may be. The last production test was made at 5962 feet and the well established a bona fide discovery in a flat district which has generally been avoided by major companies. The oil contains much more gasoline than the average crude produced in the district and is more desirable in other ways than the shallower production.

Rio Grande Oil Company and Chanslor-Canfield Midway Oil Company have obtained leases near the discovery well and probably will drill at least one well each.

Long Beach Well Completed on World's Smallest Lease

Long Beach, Calif.—Magna Oil Company, which recently attracted considerable attention by drilling on what is claimed to be the world's smallest lease, has completed its No. 1 in the Long Beach field with an initial production of 2500 barrels. This unusual well came in with a surprisingly large flow from a depth of only 5220 feet, adding to the list of good completions along the southeast slope. Wells finished in other parts of the field during the deep development of the last three years were completed between 5700 feet and 8000 feet, and such a large flow from no greater depth than many of the completions of five years ago is unusual.

Located on a small triangular plot, the well was drilled in with electrical equipment. A string of nine-inch casing was cemented at 4750 feet and the large production may be attributed to the lack of intensive development on the southeast slope. Likelihood of an appreciable decline in production in this field is very remote, with over 100 drilling projects under way and new locations offsetting the bulk of completions.

The Los Cerritos district has not maintained the pace it set three months ago from the 7500-foot zone and may not be the factor it threatened to be at the beginning of the latest deepening campaign. This part of the field has made at least two false starts in the past and only additional drilling will reveal the possibilities of the very deep zone. The south and southeast slopes are still showing best and completion of several good wells at depths far short of the average in other parts of the field must be recognized as an indication of continued drilling.

North Belridge Drilling Starts With Rush Despite Curtailment Programs

Bakersfield, Calif.—The increase in field operations in the North Belridge district is causing some concern, with a dozen projects under way and several tentative locations on file.

Richfield Oil Company's Belridge 1 has been drilled to 5805 feet and will be tested in the Temblor zone after reaming has been completed. This well found the producing zone considerably deeper than Belridge Oil Company's

Fee 15, the discovery well, but the lower structural condition may work to advantage, with a smaller flow of gas and more oil.

The promptness with which large oil companies started operations, following the discovery of the field, is taken to mean that leases will be protected as in any other field. Most operators are leaders in the curtailment movement and admit that some plan of conservation probably will be necessary at Belridge. This does not offset the natural desire to drill for the Temblor sand, however, and all companies alike are anxious to develop a very light oil production in what has heretofore been a very small producing district.

Associated Oil Company, Belridge Oil Company, General Petroleum Corporation, the Ohio Oil Company, Reward Oil Company (Associated), Richfield Oil Company, Shell Oil Company, Standard Oil Company, The Texas Company, and Union Oil Company are drilling at least one well each in and near the North Belridge field.

Huntington Beach Deep Test

Huntington Beach, Calif.—Superior Oil Company is drilling in brown shale and sand at 7320 feet in Fee 1, a deep test in the Huntington Beach field, and the outcome of this well should largely determine the trend of future operations below 5000 feet. While failure of this test would not necessarily condemn the field for deeper production, it would dampen the enthusiasm of local operators who are anxious to drill deeper but who feared the results. Other fields along the same line of structures have been heavy producers below 5000 feet but less favorable conditions have been found between 5000 feet and 7000 feet in the few tests which have ventured to place Huntington Beach in a more select class.

Tideland Wildcat Holds Interest

Santa Barbara, Calif.—Bolsa Chica Oil Corporation is coring in shale at 3865 feet in Augur 191-1, an ocean test off Coal Oil Point and about three miles east of the Elwood field, apparently having missed the formation expected at 3800 feet. This well is regarded as one of the most important wildcats drilling in Santa Barbara County, but nothing to indicate commercial production has been cored. The location was made on the theory that the Vaqueros sand, which produces in the Elwood field, forms a syncline and rises to form an anticline. The well is located on the anticline, which may be reached only from Coal Oil Point. A 1000-foot pier was built to reach the top of the structure.

Complete Elwood Tideland Well

Santa Barbara, Calif.—Caroline Spalding (Pacific Western) has completed Blue Goose 93-5, a tideland well in the Elwood field, with an initial production of 11,000 barrels. Located on the extreme west plunge of the structure and a good distance out in the Pacific Ocean, the well started flowing at a higher rate than anticipated at this stage of development. Total depth was 3651 feet and the oil showed a negligible cut. The well is the latest of a long series of large completions outside the mean high tide line and further emphasizes the importance of the Elwood field.

Wildcat Started in Olive District

Los Angeles.—The Texas Company has started a wildcat in the Olive district, Orange County, following a leasing campaign which netted about 1150 acres around the new location, which is about 2½ miles southwest of the Richfield field.

Standard Oil Dividends Are $17,000,000 Above Last Year

NEW YORK.—Despite the depression which has prevailed in the petroleum industry this year, figures compiled by Carl H. Pforzheimer and Company indicate that dividend disbursements of the Standard Oil group will show an increase this year over last year of $17,020,801. According to this report, total dividend disbursements of the Standard Oil group for the year 1930 will aggregate $286,666,728. This represents a new high record and marks another consistent increase during the five-year period beginning with 1926.

The distribution of record cash payments to stockholders for 1930 indicates the underlying strength of the Standard Oil group of companies during a period of general depression. It is noteworthy that none of the leading Standard Oil units failed to declare their regular quarterly dividends during the year, while several made extra distributions. Imperial Oil, Limited, in the final quarter of 1930 declared an extra dividend of 50 cents a share in addition to the regular quarterly dividend of 12½ cents a share. The extra disbursement aggregated in excess of $13,000,000.

Humble Oil & Refining Company also declared an extra dividend of 50 cents a share, payable January 1, 1931. This extra distribution amounting to nearly $1,500,000, is not included in the 1930 totals. Standard Oil Company of New Jersey continued the extra quarterly distribution of 25 cents a share in addition to the regular quarterly dividend of 25 cents a share throughout 1930. Standard Oil Company (Indiana) continued its regular rate of $2.50 a share per annum on the increased capital resulting from the exchange of Indiana stock for stock of the Pan-American Petroleum and Transport Company. Standard Oil Company of California declared a stock dividend of two per cent in the final quarter of 1930, not included in the figures given above, in addition to the regular quarterly cash distribution.

Total cash dividend payments by Standard Oil Company of New Jersey for the year 1930, including the last quarterly declaration, will exceed $50,000,000, which is the largest amount paid from earnings by any Standard Oil unit in a single year. Other Standard Oil units which declared extra dividends this year are Vacuum Oil Company, Standard Oil Company of Kentucky, Chesebrough Manufacturing Company and Prairie Pipe Line Company.

Following are the quarterly and annual dividend disbursements recorded for the Standard Oil group during the five-year period beginning with 1926 and ending with the present year:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
1930	$66,722,165	$68,590,901	$68,306,015	$83,047,644	$286,666,728
1929	63,101,701	66,053,389	65,426,981	75,063,856	269,645,927
1928	48,927,760	57,694,206	50,068,102	62,050,357	218,740,335
1927	55,873,413	54,291,615	47,728,440	55,804,755	213,698,223
1926	40,580,317	50,618,451	46,443,278	62,685,548	200,327,594

Coring in Wasco District

Bakersfield, Calif.—Cities Service Petroleum Company, California subsidiary of the Cities Service Company, has started a series of core holes in the Wasco district, the first location having been made on Section 16-28-24.

Oklahoma--Kansas Field Notes

FLOYD L. SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Oklahoma City Has Produced 40,202,900 Barrels in Two Years

OKLAHOMA CITY.—Thursday, December 4, brought to an end the second year of production in the Oklahoma City pool. Indian Territory Illuminating Oil Company's Oklahoma City Number 1, C SE SE, Section 24-11n-3w, discovery well, was completed December 4, 1928, for an initial gauge of 5600 barrels in 24 hours from the Arbuckle Limestone at 5624 feet. On October 31, 1930, the last date upon which it was reported on production, the gauge was 65 barrels of oil and 80 barrels of water in three hours.

As of December 1, 1930, accumulated production from the pool amounted to 40,202,900 barrels. During 1929, it produced 8,638,000 barrels, most of which was sold at $1.50 per barrel. Production between January 1, 1930, and November 1, 1930, was approximately 29,162,000 barrels, practically all of which was sold at $1.26 per barrel. Production for November of this year was 2,402,900 barrels commanding a price of $1.01 per barrel. Assuming that all of the oil which has been produced is now reduced to cash at the posted prices prevailing during the above mentioned periods the total gross return would be approximately $52,128,000.00. A majority of the oil held in storage is in working storage and no figures are available as to the amounts. Based on the assumption that $160,000.00 per well is a fair average cost without the inclusion of leaseholds and lease equipment the 658 wells completed prior to December would cost approximately $105,000,000.

During this period of development eleven failures have been encountered, one rig abandoned, and one location abandoned within the immediate vicinity of the pool. Two other wells in the south part probably will be included as failures within a short time. Along the northeast edge of the pool, Indian Territory Illuminating Oil Company's L. Banta 2, NW SW SE, Section 18-11n-2w, was abandoned at 4440 feet after having had the top of the Pawhuska at 3320 feet. T. B. Slick's Banta 1, SE SW SE, Section 18-11n-2w, was abandoned at 7555 feet having had the top of the Simpson at 7320 feet and top of the Checkerboard lime approximately 150 feet lower than its west offset. It swabbed 90 barrels of oil at 6724 feet but the showing was not considered commercial for this depth. The same company's Banta 2, NE SW SE, was abandoned at 5525 feet having been shut down for a considerable period awaiting the results of the Banta 1. Coline Oil Company's Warren 6, NE SE SW, Section 18-11n-2w, was an abandoned rig after tests to the east were showing as failures. Approximately one mile southeast of the above mentioned group of dry holes Prairie Oil and Gas Company's and T. B. Slick's Hiddleston 2, SEc, Section 19-11n-2w, was abandoned at 7260 feet having had a 170 barrel test at 6857 feet. Hiddleston 8 NE NW SE, on the same lease was an abandoned location. This group of tests gave the first impression of the existence of a fault line striking northwest-southeast by which production is limited on the northeast side of the structure.

In the south part of the pool, Section 36-11n-3w, has been the scene of some interesting dry hole data. Firestone Oil Company associated with L. E. Trout and others, after a series of shut-downs abandoned their State land 1 NW NW SE at a total depth of 4479 feet. In the latter part of August, 1930, Sinclair Oil and Gas Company completed its Number 5 well 100 feet west of the old Firestone location for a gauge of 8808 barrels in six hours, having drilled approximately 2200 feet deeper than the Firestone well to bring about the success, where early drilling revealed a failure. Well 4 NE SE SE, of the same lease was drilled to a total depth of 6926 feet and abandoned without having had production in the Wilcox. On the extreme southeast of the pool, Prairie Oil and Gas Company's V. Sudik 1, NW NW NW, Section 5-10n-2w, had the top of the Wilcox at 6850 feet with 4500 feet of water in the hole. It was abandoned at 6896 feet. Its west offset, Continental Oil Company's Sudik 4, NE NE NE, Section 6-10n-2w, was a failure at 6955 feet, offsetting a 25,000-barrel well on the west and a 38,000-barrel well on the north. In the same sector, Indian Territory Illuminating Oil Company's Reynlods 2, SE NE NW, Section 6-10n-2w, was abandoned at 6777 feet. Its south offset, Prairie Oil and Gas Company and others' J. Reynolds 1, was abandoned at 5615 feet, approximately one mile southeast of production in the south end of the pool. Phillips Petroleum Company, Prairie Oil and Gas Company, and T. B. Slick's Sudik 1, NEc, Section 8-10n-2w, had a hole full of water in the Wilcox at 7716 to 7720 feet, and was abandoned at the latter depth.

In a like position with relation to the north end of the pool, Magnolia Petroleum Company's John M. Noble 1, NW SW SW, Section 30-1sn-2w, was abandoned at 7176 feet. Other failures have been encountered within the district but not close enough to have a direct bearing on the definition of the Oklahoma City structure.

During the week ending November 30, five wells were completed and two locations announced. Hall & Briscoe's Holmes 7, NE NW SE, Section 10-11n-3w, gauged 4215 barrels in two hours and 30 minutes with 23,000,000 gas from 160 feet of Detrital material topped at 6290 feet. Skelly Oil Company's Harper-Turner 1, S½ NE NE NE, Section 3-11n-3w, gauged 9977 barrels in four hours from Wilcox sand topped at 6263 feet and drilled to 6434 feet. Gas gauged 45,000,000 cubic feet. Indian Territory Illuminating Oil Company completed two relatively small wells in the southwest edge of the pool. Weber-Wall 1, SE NW SW, Section 14-11n-3w, produced 1041 barrels in seven hours 35 minutes, from broken sand topped at 6350 feet and solid sand from 6520 to 6550, and Ivanhoe 2, SW NE NE, Section 15-11n-3w, made 94 barrels in 15 minutes from Wilcox sand topped at 6345 feet and drilled to 6600 feet. Russell Petroleum Company's Fee 1 NW NW NE, Section 2-11n-3w, gauged 383 barrels in 25 minutes from sand topped at 6170 feet; total depth is 6463 feet.

Anderson-Pritchard and Phillips Petroleum Company's Hathaway 1, Lot 14, block 22, Section 10-11n-3w, Terrace Lawn Addition and Phillips Petroleum Company's Johnson 1, Lot 41, block 20, Central Addition, Section 3-11n-3w, are new locations for the week. The former is 804 feet east of the west line and 1422 feet north of the south line of the northeast quarter and the latter is located 787 feet north of the south line and 483 feet east of the west line of the southeast quarter.

Limits of Tatums Pool Depend on Five Drilling Wells

Tulsa.—Five wells, the outcome of which will do much toward defining the Tatums pool, are now drilling. Westheimer and Daube, Westheimer et al's 1, NE NE NW Section 25-1s-3w, and Carter Oil Company's J. Hopson 1 NE NE NE of the same section, are both one location south of production in the extension area; Trevely Oil Company's S. V. Hooks 1 NW SW SE, Section 13-1s-3w, is one location north of production in the extension area; Magnolia Petroleum Company's Weiss 1 SW SE SW, Section 19-1s-2w, is one location east of production; and Lesh and McCall's Rufus Hooks 1 SE NW SW, Section 14-1s-3w, is one-fourth of a mile north of production in the old part of the field.

Magnolia Petroleum Company is building derrick for its R. F. McCrory 1 SE SE SE, Section 10-1s-3w, new location approximately one mile north of production in the old part of the field and Carter Oil Company will move in material at its J. T. Grooms 1 SE NE NE, Section 24-1s-3w, east offset to Carter and Cox-Hamon's, James Hooks 1 completed last week.

Two wells were partially completed during the week. Trevelyn Oil Company's Meeks 1 SE SW SW, Section 19-1s-2w, easternmost producer, swabbed 28 barrels of oil in 18 hours and may be drilled deeper. Production is coming from broken sand at 1793 to 1871 feet and solid sand at 1871 to 1934 feet. It is an east offset to Gant et al's Meeks 1, which produced only 136 barrels initially from a series of sands between 2128 and 2281 feet. C. L. Anderson completed washing liner and expected to start bailing on his Eaves 6 NE NW SW, Section 24-1s-3w. Approximately 200 feet of broken oil sand was logged between 2357 and 2625 feet.

Two Wells Near Pay in Wewoka Townsite Area

Tulsa.—Deep Rock Oil Corporation has two wells nearing the pay horizon in the new Wilcox sand area of Section 30-8n-8e and the Mid-Kansas Oil and Gas Company's Davis 2, NEc SE NW, Section 30-8n-8e, should be a completion within the week. The former's Douglass 2, C NE NE SW, Section 30-8n-8e, set 6⅝-inch casing on top of the Woodford at 3795 feet and was drilling below 3850 feet at last report. Same company's Smith 2, SWc NW NE, Section 30-8n-8e, was connecting up to complete at a total depth of 3848 feet. All three tests are within two locations of Deep Rock Oil Corporation's Whitworth 1 NW SW NE, Section 30-8n-8e, new discovery which topped the Wilcox sand at 3899 feet and was completed as a 2000-barrel well on October 17. New work on the well has increased production to about 2100 barrels.

Operations in Kansas Slump to Lowest Point

Wichita, Kansas.—New work in Kansas slumped to the lowest point it has seen in many months when only eight new locations were announced during the past week. McPherson County led with two and Comanche, Norton, Sedgwick, Russell, Greenwood, and Rooks Counties had one each. There are 171 operations in the state, 61 of which are rigs and locations and the remaining 109 drilling. Sedgwick County holds the lead with 21 drilling wells, rigs, and locations, McPherson County is second with 17, Greenwood County third with 13, and Cowley County fourth with 12.

One of the most important finds of the week was at Noble Drilling Company's Zerger 1 NW NE SE, Section 16-21s-3w, one-half mile south of production in the Voshell pool. Base of the Viola lime was at 3408 feet and at 3421 to 3425 feet a pay zone believed capable of producing around 1000 barrels.

Hardendorf et al's Sullivan 1 NEc, Section 12-29s-38w, approximately 3½ miles southwest of the town of New Ulysses and more than 20 miles northeast of the main Hugoton production, gauged about 3,500,000 cubic feet of gas at a total depth of 2835 feet, apparently in the same horizon which is producing to the south. The well was started by McKenna et al but was recently purchased by Hardendorf.

The Hugoton area now has 105 completed gas wells ranging in initial volume from approximately 1,000,000 cubic feet to 14,000,000 cubic feet. Actual daily potential is in excess of 700,000,000 cubic feet, placing it among the outstanding gas producers of the United States.

Logan County Records Failure

Tulsa.—Tom Slick interests and The Texas Company's Jones 1, SE NW, Section 24-17n-2w, wildcat test 3½ miles northeast of Guthrie, has been drilled to a total depth of 5744 feet, where it was bailed down 1000 feet and had a hole full of water. Top of the Wilcox was at 5709 feet where an odor of oil and gas was encountered. Successive coring revealed nothing but dry sand until water was found. Droppleman et al's Fundis 1, SEc NE, Section 19-7n-3e, is drilling below 4760 feet in Woodford and reported running structurally low as compared with nearby production.

Wanette Area Has New Location

Tulsa.—The only thing of importance in the Wanette pool during the past week was the announcement of a new location by Donahue and Pearson on the Farley 1, NWc, Section 25-6n-3e, about one-half mile east of production. This will be an important test so far as revealing further information up the structure to the east. Early in the development of the pool several geologists were of the opinion that the sand might pinch out up the dip and wells in the eastern part of Section 22 and the western part of Section 23 indicated that such a condition might be found. Subsequent development has resulted in larger wells to the east and northeast and has given an indication that the structure may have closure in that direction.

Sacred Heart Area

Tulsa.—Robinson, Hicks and Phillips Petroleum Company's Crouch 1, NW NW SW, Section 5-6n-5e, near the town of Sacred Heart and approximately 1½ miles south of production in the St. Louis pool, has a hole full of fluid, about 1600 feet of which is water, believed to be in the Upper Simpson formation. Total depth is 4325 feet. A show of water was reported between 4256 and 4266 feet which, so far as is known at this time, is the source of all of the water now in the hole. Subsequent measurements revealed a 25-foot correction as to depth, making top of the pay at about 4241 feet and the water showing between 4231 and 4241 feet directly above the top of the pay.

Denver, Colo.—A discovery of oil has been made on South Park structure by South Park Oil Company in Park County, Colorado. Hole is bottomed at 1580 feet in a sand which correlates with the Torchlight in Wyoming; it is the first of a series of nine to be penetrated within 4000 feet of drilling. A test of the production is to be made before drilling is resumed.

North and West Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

Efforts Are Renewed to Obtain Cooperation in North Texas

WICHITA FALLS, Texas.—Renewed efforts to obtain cooperation of producers and crude purchasers in enforcing an equitable proration program in North Texas were launched here November 25. The meeting voted to reduce the daily allowance of marginal wells in the shallow horizons from six to four barrels, and organized an operators committee, comprising representatives of all important crude buyers and the principal producing units. This newly formed committee will function with the district's proration leaders in bringing about a reduction of the crude output to a maximum of 52,395 barrels daily, as fixed by the recent order of the Texas Railroad Commission, thus reducing the necessity of many operators selling oil at sacrifice prices in order to protect leases from inequal drainage.

The joint session of producers and crude purchasers was sponsored by the North Texas Oil & Gas Association, with P. B. Flynn, manager, Reno Oil Company and president of the organization, presiding. Many irregularities have developed in the district's proration program in the past, and the situation has become critical because of approximately 19,000 barrels daily production being sold at distress prices to about 12 local refineries. Marketing of this large volume of crude at buyers' offers has branded the district as being one of the worst sore spots in the Mid-Continent, and has resulted in some of the major buyers curbing their takings. The operators pledged their support to stabilize the market, while representatives of purchasing companies promised to scatter their takings over a greater number of leases through the reduction of marginal allowances of the shallow wells, which predominate in the district.

E. H. Eddleman, manager, American Refining Properties, Inc., was elected chairman of the newly created operators' committee, which is composed of nearly a score of producers and representatives of purchasing companies. Fred Sehmann, secretary-treasurer of Petroleum Producers Company, was appointed secretary for the committee. Preliminary arrangements for the financing of the services of a full time umpire were among the first acts performed by this committee. L. V. Hull was appointed umpire for the district to become effective October 15, but did not accept the position because of having no assurances that his salary and expenses would be paid. However, this responsibility has been assumed by the committee, and Hull was scheduled to begin active work early in December.

NORTH TEXAS OPERATORS COMMITTEE

Merrill W. Blair	United Producers Company
J. S. Bridwell	Bridwell Oil Company
Bert L. Broday	Humble Oil & Refining Company
W. D. Brookover	Panhandle Refining Company
Walter K. Campbell	Grayce Oil Company
L. H. Cullum	Perkins & Cullum
E. D. Coady	Prairie Oil & Gas Company
E. H. Eddleman	American Refining Properties, Inc.
P. B. Flynn	Reno Oil Company
C. W. Hanley	Gulf Production Company
H. P. Hodge	Magnolia Petroleum Company
L. V. Hull	Umpire
J. L. McMahon	The Texas Company
Chas. P. McGaha	Fain-McGaha Oil Corporation
Dan Mahoney	Stanolind Crude Oil Purch. Co.
John F. O'Donohoe	Petroleum Producers Company
T. O. Shappell	Shappell Oil Company
M. H. Shanahan	Continental Oil Company
W. T. Waggoner Jr.	Waggoner Refining Company

Potential Is 74,000 Barrels

Estimated daily potential production of North Texas is placed at about 74,000 barrels, while marginal wells are producing about 23,000 barrels of the above sum. It is planned to prorate all leases that produce in excess of the marginal well allowance to about 58 per cent of the potential to reduce the district's output to 52,395 barrels daily during the next 60-day proration period. However, no leases will be prorated to less than the marginal allowance if market outlet can possibly be provided. Humble Oil & Refining Company adopted the four-barrel marginal allowance effective November 25 on its purchases in the district.

Annexation of the numerous shallow pools and fields in north Young County to the North Texas district was discussed at the meeting. This group of oil areas is now being carried in Central West Texas for proration purposes, with a limit of 4850 barrels daily authorized by the commission during the next 60-day period. North Young County is closely related to North Texas, and will probably be assigned to the latter if arrangements can be made to also transfer the production quota.

Estimated potential production of the north Young County area, which includes that portion of the county lying north of an east and west line drawn through the town of New Castle, is rated at 30,751 barrels daily from 437 wells, according to figures compiled and released late last week by Umpire W. H. Dyer of Graham. The proration schedule for the November 25 to January 25 period allows a marginal allowance of six barrels daily from shallow wells, which accounts for an exemption of 2666 barrels, while production subject to proration amounts to 28,085 barrels.

The Riggs field, which is producing from sand at the 650-700-foot level accounts for 22,299 barrels of the potential production credited to north Young County. This single area has 80 completed wells, and all are producing above the marginal allowance. The proration quota for the Riggs field is limited to 2659 barrels daily. Most of the oil is being handled by Texas Pipe Line Company on a common carrier basis, calling for deliveries of a like amount of crude to refineries in the vicinity of Wichita Falls. The oil is pumped south, and actual deliveries to the above plants are made mostly from Wichita and Archer County runs by Texas Pipe Line Company. Prairie Pipe Line Company was the only direct pipe line outlet for the Riggs field until the above company began running oil November 11.

Riggs District, North Young County

Proration figures on all leases in the Riggs district, Young County, Texas, as compiled by Umpire W. H. Dyer to be effective from November 25 to January 25, 1931, with totals in-

cluded for all other areas in north Young County, defined as being north of an east and west line drawn through the town of New Castle:

Company, Lease—	No. Wells	Daily Potential Prod.	Exempt Prod.	Excess Production	Daily Production Allowance
Darby & Julian, Larimore	7	1,740	42	1,698	216
H. Y. Oil Company, Larimore	2	640	12	628	74
Phillips Petroleum Company, Larimore	14	5,240	84	5,156	599
Panhandle Refining Company, Larimore	3	700	18	682	86
Kleiner & Riggs, Larimore	2	964	12	952	107
United Producers Company, Larimore	1	200	6	194	25
Westheimer & Daube, Larimore	9	2,340	54	2,286	282
E. R. Riggs et al, Larimore	16	4,760	96	4,664	562
King Royalty Company, Graham	6	2,000	36	1,964	232
Petroleum Producers Company, Graham	6	1,200	36	1,164	152
Young Brothers & Alexander, Remington	6	540	36	504	86
E. R. Riggs et al, Kirkland	3	1,380	18	1,362	154
John Kleiner et al, Graham	2	120	12	108	22
John Kleiner et al, Perkins	1	50	6	44	10
Primrose Refining Company, Kirkland	1	350	6	344	40
King Royalty Company, Kirkland	1	75	6	69	12
Total	80	22,299	480	21,819	2,659
Miscellaneous pools	357	8,452	2,186	6,266	2,770
Grand total	437	30,751	2,666	28,085	5,429

Two Big Lake Deep Wells Have Been Tubed

SAN ANGELO, Texas.—Installation of tubing has been completed on two of the record depth oil and gas producers in the Big Lake field in compliance with the Texas Railroad Commission's orders, and work is underway on two other tests. Preliminary study of the results obtained by equipping the wells with tubing indicates that the expected reduction in the gas-oil ratio will not take place. The seven deep producers in the field produced 14,413 barrels 58 gravity oil and 118,809,000 cubic feet of gas during the 24 hour period ending 7 a. m. December 1, resulting in a ratio of 8243 cubic feet of gas per barrel of oil.

Big Lake Oil Company's University 2-C flowed 2138 barrels oil and 17,853,000 cubic feet of gas on latest gauge through three-inch tubing, with 1600 pounds pressure on the casinghead and 800 pounds on the tubing. This well has a total depth of 8603 feet. The same company's University 4-C, made a record yield of 4361 barrels oil and 37,147,000 cubic feet gas late last week just prior to the starting of tubing into the hole, and gauged 3942 barrels oil and 23,949,000 cubic feet gas, with 450 pounds pressure on latest report, with 56 joints tubing installed.

Group One Oil Corporation (Continental Oil Company's) University 3-B has been equipped with 89 joints of three-inch tubing and 201 joints of four-inch tubing, extending to the 8617-foot level. This well produced 11,411 cubic feet of gas per barrel oil on latest gauge, which credited it with making 1735 barrels oil and 19,799,000 cubic feet of gas, with 1125 pounds casing pressure and 650 pounds tubing pressure. A 17-pound mixture of mud and baroid is being prepared by this company to kill University 2-B so as to cement a string of seven-inch pipe near the 8000-foot level. The actual killing of the well will be done by Halliburton Oil Well Cementing Company.

These two concern's have been given until December 15 to comply with the Commission's order in regard to tubing of the wells. The 30-day extension period was granted by the commission at the conclusion of a hearing held in Austin last week.

Production from the seven deep wells in the Big Lake field for the 24 hour period ending 7 a. m. December 1, is listed below:

	Oil Production	Gas Production	Lbs. Back Pressure	Total Depth
Group One Oil Corporation—				
University 1-B	2865	22,340,000	165	8523
University 2-B	2072	27,691,000	700	8489
University 3-B	1735	19,799,000	*1125	8633
Big Lake Oil Company—				
University 1-C	1492	6,102,000	450	8668
University 2-C	2138	17,853,000	†1600	8603
University 3-C	169	1,075,000	600	8923
University 4-C	3942	23,949,000	‡450	8697

*Represents casinghead pressure and has 650 pounds tubing pressure.
†Represents casinghead pressure and has 800 pounds tubing pressure.
‡Running tubing.

Further Curtailment of Yates Output Agreed

DALLAS, Texas.—Reduction of allowable production in the Yates field from 100,000 to 89,500 barrels daily beginning December 5 was authorized by operators during a proration meeting held here December 2. This cut of 10,500 barrels was largely due to the fact that Humble Oil & Refining Company and Shell Petroleum Corporation desiring to take less oil from the field, and will continue until January 25 with provisions made for extensions. John R. Suman, director, Humble Oil & Refining Company and chairman of the Yates proration advisory committee, presided at the meeting.

Yates operators also approved an extension of proration for another six months period, beginning January 1, and during this period the maximum production allowance will be held to 100,000 daily until March 1, then a maximum of 120,000 barrels during the remaining three months of the period. However, actual production will be held to nominations of purchasers, and the maximum figures are used to provide means for automatically boosting the field's output should purchasers desire the oil.

Action taken at the Dallas meeting will be forwarded in the form of recommendations to the Texas Railroad Commission for approval, but such is only a formality.

Potential production of the Yates field is estimated at 5,500,816 barrels daily from 399 flowing and pumping wells. These wells have lately been averaging about 250 barrels daily each under the 100,000-barrel production allowance. The field's production quota has been 1.82 per cent of the potential, which is generally conceded to be exaggerated.

The rise and decline of daily production allowances in the Yates field during the three years that it has been on a systematic proration plan follows: October 1, 1927, 30,000 barrels; November 1, 1927, 37,000 barrels; December 1, 1927, 42,000 barrels; January 1, 1928, 48,000 barrels; May 1, 1928, 52,500 barrels; July 1, 1928, 65,000 barrels; September 1, 1928, 72,500 barrels; February 1, 1929, 87,500 barrels; May 10, 1929, 100,000 barrels; July 1, 1929, 130,000 barrels; March 20, 1930, 110,000 barrels; July 1, 1930, 100,000 barrels.

EAST CENTRAL TEXAS FIELDS

Oil Show in Two Tests Revives Interest in Joiner Area

TYLER, Texas.—Revival of interest in the Joiner area, located in northwestern part of Rusk County, took place during the past week as result of two tests showing favorable for producers from the 3600-foot Woodbine sand horizon when tested through drill stem. Two other operations near the discovery well are also in process of completion. Failures scored by the first two completions in the area several weeks ago had a discouraging influence on operations, which are being conducted almost entirely by independents, and a number of proposed tests have not progressed beyond the derrick stage.

Completion of a second producer in the Joiner pool was temporarily delayed by a fire on the morning of December 2, but preliminary estimates on the production credit it with being good for about 300 barrels daily.

Stroube & Stroube's Frederick 1, located a short distance northeast of the discovery well, showed considerable gas and flowed by heads when swabbed in from broken sand at 3526 to 3568 feet, with total depth of 3618 feet.

The gas drifted to the boilers and caught fire. The derrick was damaged by fire, and repairs must be made before completion work proceeds.

Frank Foster and Deep Rock Oil Company's C. D. Ashby 1, located on a 60-acre lease and about three-quarters of a mile west by south of the discovery well, made a flow of oil when the sand tester was run at 3597-3618 feet. This test has cemented 6⅝-inch casing at 3580 feet, and will probably drill plug later in the week. Two 1000-barrel capacity storage tanks have been erected on the lease by Parkersburg Rig & Reel Company.

Further hopes for additional producers in the area were gained during the past week when H. L. Hunt and associates' Daisy Bradford 1, located a short distance south of the producer, encountered oil saturated sand, with shale breaks, at 3542-86 feet and Georgetown lime at 3645-50 feet. Casing was set at 3535 feet. Drilling of plug on this test was slated to begin early this week, while in meantime a string of 2½-inch tubing has been made up to install in the hole. Hunt and associates have a small line extending from their 17-acre lease to a 10-car capacity rack at the railroad, and are the only operators in the field so protected with transportation facilities. Stroube & Stroube's W. H. Frederick 1, which was reported last week as having showed oil when given drill stem test in sand and shale at 3526-68 feet, has cemented 6⅝-inch casing at 3514 feet. This outpost test logged lime at 3614-18 feet.

Three attempts to get returns on sand tester used on Andy Anderson and others' Daisy Bradford 1 at 3586 feet failed, and preparations were being made December 1 to try again. This test is only a short distance southeast of Joiner et al's producer. Tex Lloyd and associates were running casing early this week on their Camp five-acre lease at 3531 feet rather than to drill through the Woodbine sand horizon as others have been doing, and will resume drilling. This string of pipe will be cemented in the event deeper drilling yields an oil saturated sand.

Production from Joiner et al's discovery well on the Bradford farm averaged 185 barrels daily flowing through tubing during the past week. This production is being sold for fuel on nearby rigs.

In Cherokee County, Arkansas Fuel Oil Company's wildcat test on the N. A. Deaton farm, F. Coleman Survey, encountered salt water in the Woodbine sand horizon at 4628-4705 feet, and has been ordered abandoned.

Another try for deep production near Kosse is to be undertaken by A. Yost, W. A. "Bill" Reiter and others. These operators have staked location to be drilled on the S. J. Fenner 160-acre tract, H. C. Hoskins Survey, and about one mile west of the townsite, but in Limestone County. Geo. B. McCamey et al are drilling for shallow gas production in the Kosse townsite, but lost the hole at 660 feet, and have skidded machine. In the Datura community, Limestone County, a deep test is to be drilled by E. E. Obyrne, E. L. Chapman and others on the S. W. Hancock 37-acre tract, H. York Survey.

Seven New Van Locations Ordered Drilled

TYLER, Texas.—Seven new locations were ordered drilled in the Van field during the past week, including four on unitized acreage, by the Pure Oil Company. Derrick has also been erected by Stumpff and associates to drill on a three-acre strip lease, located in doubtful territory to the north of the extreme east portion of the field. Five oil producers were added to proven leases in the field during this period.

Development work in the Van field has been continuous since its discovery in October, 1929, by Pure Oil Company, and indications are that the volume will be increased in view of the fact that production allowances for the area are almost certain to be stepped up at intervals, beginning December 15. An application is now pending for a 50,000-barrel daily quota after February 15, 1931, and action will be taken by the Texas Railroad Commission after a hearing to be held December 10. This hearing is considered to be only a formality, as Humble Pipe Line Company is nearing completion on a large pipe line investment to permit delivery of the increased production allowance to the Baton Rouge, Louisiana, plant of Standard Oil Company of Louisiana, while in the meantime the latter concern has severed its normal takings of crude from Texas Panhandle and miscellaneous areas in Oklahoma and Kansas fields.

New tests being started by Pure Oil Company in the Van area are all located on leases that now have one or more producers. The only one that is likely to add new territory to the field is Mrs. Ella York 2, which will be drilled in the southeast corner of the 39.6-acre tract, John Walling Survey. Stumpff et al's strip lease location is on the L. K. Riggs land, William Daniel Survey, and is located only a short distance north of a dry hole drilled last summer by C. Andrade et al on the Carter vacancy.

Humble Oil & Refining Company increased its producing wells outside the Van unitized area to nine in completing Sanger Bros. 2, making 83 barrels oil per hour through 11/16-inch choke from Woodbine sand at 2780-2943 feet. The gas volume was rated at 864,000 cubic feet daily, choked. The oil tested 76 degrees temperature. Sanger Bros. 1 was drilled by Anderson-Fogelson et al on an alleged vacancy in the northwest portion of the farm, but ownership of this well is being contested by Humble Oil & Refining Company.

Pure Oil Company's Sam Allen 1, located in the southwest portion of the J. Prado Survey, and on the extreme south end of the Van area, has been halted at 2854 feet after cementing casing at 2841 feet. This test logged top of Austin chalk at 2511 feet. It is running low on structure.

New Mexico and Rocky Mountain Area

Two Companies Seek Higher Allowance at Hobbs

DALLAS, Texas.—Two holdouts for a higher production allowance in the Hobbs, New Mexico, area furnished the only opposition to a proposed continuation of proration for another six months after the present period expires January 10, 1931. Operators met here November 29 to vote on Hobbs proration, and affix signatures to a petition to be submitted to New Mexico authorities, who also must endorse the restriction program if it is to be continued. Officials of Tidal Oil Company and Amerada Petroleum Corporation withheld their signatures until disposition is made of their requests for a greater production allowance in the field. Endorsement of continued proration is not binding upon operators that did sign unless unanimous support is given the plan. The two dissenting operators voiced their approval of proration, and are displeased only with the small production allowance.

Allowable production at Hobbs would have to be increased from its present level of 29,867 barrels daily to approximately 100,000 barrels daily to conform with the demands of Tidal Oil Company, which is producing 1434 barrels daily and insists on a daily recovery of 5000 barrels during the first three months of the new period. Jas. R. Gahan, Fort Worth, vice-president Tidal Oil Company, stated that he had specific instructions from the New York general offices of his company to demand the increased allowance. Gahan explained that his company has a private gathering system in the field, and has contract to move crude on a common carrier basis to coast by way of Atlantic Pipe Line Company's system. No explanation was given by Gahan as to why his company wished to produce a fixed quota of oil from its properties for only the 90-day period specified. Gahan stated that his company did not care to buy any oil as long as it held 48,554 barrels average daily potential from six wells on five units, and that plans are to produce 5000 barrels daily.

Seeks Yates Cut

Amerada Petroleum Corporation will insist that actual production at Hobbs be increased to 50,000 barrels daily, according to H. E. Marsh, Fort Worth division land department head of the company. Marsh stated that his company was not satisfied with its present allowance of 3557 barrels daily from 10 wells, which have a combined potential yield of 127,526 barrels daily. Protest was registered against the failure of pipe line companies to take 35,000 barrels daily from the field as agreed upon at the start of proration on July 10, 1930. Marsh suggested that allowable production in Winkler County, Texas, be reduced to permit the increase output requested at Hobbs, as the former is producing near its capacity while New Mexico's single flush field is not enjoying a quota in proportion to its potential. Amerada Petroleum Corporation has a contract that was made prior to proration to deliver a total of 3,000,000 barrels of Hobbs crude at maximum rate of 7500 barrels daily to Atlantic Pipe Line Company at market price. However, both parties to this contract waved their rights in order that restricted production could be applied to the field last July. The contract is still in effect.

Replying to the request that Winkler County be made to sacrifice production to benefit the Hobbs area, Ed. A. Landreth, Fort Worth, president of Landreth Production Corporation, stated that a committee was at work in trying to bring about a 10,000-barrel decrease in production allowance for the Yates field, and between 12,000 and 15,000 barrel reduction in Winkler County. Landreth is chairman of the West Texas proration committee, operating in conjunction with the central committee for the state. He added that his committee would meet shortly to try and put over the proposed cuts in West Texas production, and that a reduction in the Howard-Glasscock County district and Big Lake field would also be attempted. Increased production allowance at Hobbs would result in a price decrease, according to Landreth.

H. C. Bratschneider, vice-president, Midwest Refining Company, discoverer of the Hobbs area, stated that his company would not hesitate to join a movement that would permit the closing in of all wells at Hobbs in order to help out the general crude market situation. He pledged the support of his company to any program that would keep the field on the same production basis.

Withdrawal of Humble Oil & Refining Company as a crude buyer at Hobbs will follow if the production demands of the two protesting companies are fulfilled, according to John R. Suman, director of the company. Suman stated that it would be a serious mistake to grant an increase in production, and that reductions must be made in the output of a number of West Texas areas shortly. He added that Winkler County operators are producing about 1,500,000 barrels fluid daily in obtaining about 57,000 barrels pipe line oil.

Humble Oil & Refining Company now has enough production of its own in various fields to fill its requirements without buying oil from anybody, according to Suman. He added that his company has been receiving complaints from its crude customers against Hobbs oil because of its high gravity building up the common stream of fluid from West Texas to above 29 gravity in pipe line deliveries to coastal terminals.

Suman Puts Motion

Suman submitted the motion to extend proration at Hobbs for six months, with the outlet restricted to nominations of purchasers, and that the agreement be drawn by a group of attorneys to be appointed by the chairman from ranks of the oil companies, then when signed up be submitted to the governor and land commissioner of New Mexico. A second to the motion followed promptly, and all but two operators voted favorable. L. E. Barrows, manager Fort Worth division of The Texas Company, offered a motion that the operators go on record that it is the consensus of the meeting that the outlet should be 50,000 barrels daily, and that efforts would be made by operators to bring same about. This motion carried.

E. G. Allen, Dallas, superintendent production for Shell Petroleum Corporation, and chairman of the Hobbs proration advisory committee, explained that after a series of comparative tests the petroleum engineers in the field have perfected a "curve" system to use in determining the po-

tential production of completed wells by flowing through tubing only, and asked for a vote on the plan. The principal object is to avoid opening of wells to capacity flow, resulting in great sacrifice of gas and rock pressure, when taking potentials at intervals. The chart prepared by the engineers affords a fairly accurate determination of the open-flow capacity of a well when tested through three-inch tubing, with calculations made on gas volume and well pressure recordings during the official gauge period.

The flowing life of wells will be prolonged by adopting the tubing and curve potentials, according to Suman. He suggested that the proration committee release for publication only the average tubing potentials, instead of the estimated open flow potential of wells, based on tubing yield and the curve plan. Such a plan would tend to lessen the production possibilities at Hobbs when reference is made to its possibilities. Similar moves were made at Yates and Van, with potentials on the former released for publication on a 12-hour basis, while daily potentials at Van are taken only through 11/16-inch chokes.

C. G. Staley, umpire at Hobbs, testified that while the engineers are unanimously in favor of adopting the curve method, some are of the opinion that the chart should be changed from time to time. Staley advised that there are only two pumping wells at Hobbs, and that one of these makes water with the oil. All other wells are free from water troubles.

K. Winship, Tulsa, vice-president, Gypsy Oil Company, suggested in the form of a motion that when the scheduled re-gauging of all wells takes place January 15, 1931, that the tubing and curve method be adopted. Such a plan will be used for three months, and any well owner that chooses to continue the open flow method will be privileged to do so. This motion carried when put to a vote, and it is expected that more than 70 per cent of the wells will be gauged only through tubing.

New Field Proven in Park County, Wyoming

Billings, Mont.—Another field has been proved in the Rocky Mountain territory. It is the Badger Basin structure, Park County, Wyoming, where the deepest hole in the territory is producing a large amount of gas after the bit had barely tapped the first Frontier formation. Tools are bridged in the hole and have not been recovered. Work is made difficult and slow by the gas pressure and the extreme depth—8255 feet. Resolute Oil Company, owned principally by Great Falls, Detroit, and New York capitalists, controls the entire structure, embracing about 20,000 acres of which the Northern Pacific Railroad owns alternate sections; it is this company which drilled the well and hung up the record for the deepest hole in the Rocky Mountains.

The well was cased to 4150 feet, and an eight-inch hole was drilled to 8250 feet where the first Frontier was reached. A very heavy flow of wet gas was encountered which blew the tools up in the hole. It sprayed the crown block with small rocks and naphtha for half an hour, and continued to gas heavily. Tools became jammed and have not yet been removed. Company plans to run and cement a string of 5¾-inch seamless upset casing, to complete the well, and to test it at its present depth to ascertain its actual capacity.

While sands are found at greater depth than operators in the Rocky Mountain region are accustomed to, the field is ideally located and would seem to be suitable for rotary drilling. Improved methods and equipment will make possible reaching the producing sands in the territory, including the Embar. Geology for the structure was mapped by George S. Kearney and Charles T. Lupton.

Salt Creek Well Has Tested All Formations

Casper, Wyo.—Final completion has been made by Midwest Refining Company of the test it drilled in the heart of the Salt Creek field through all possible producing sands. The well was drilled to the granite and has now been plugged back to the Tensleep sand where it originally produced about 1800 barrels of 27.5 degree gravity crude, but which has increased its production in that horizon to 1949 barrels. The well is shut in and will not be produced for the time being. It produced commercially in the Frontiers, the Dakota, the Sundance, and the Tensleep; Sundance production was good for about 6000 barrels per day.

Wagon Hound Wildcat Well Is Abandoned

Thermopolis, Wyo.—The wildcat well drilled by Midwest Refining Company on Wagon Hound structure is being abandoned at 4520 feet in lost hole. The location of the well is in Hot Springs County, northwest of Thermopolis. There have been repeated showings of free oil in this test, but none in commercial quantities. It is understood that the well may have been a little off structure. Fishing job proved impossible and well was abandoned.

Swab Santa Fe Springs Deep Well

Los Angeles.—George F. Getty's No. 48, a deep test in the Santa Fe Springs field, is being swabbed from a total depth of 9350 feet, but the well is showing only water, mud and a trace of oil. A string of 2½-inch tubing was run for the production test, following the running of a 4¾-inch liner.

National Supply Company's Profits Good Despite Curtailment

Pittsburgh.—National Supply Company's net profits for the first nine months of this year, after charges for federal taxes, preferred dividends, etc., amounted to $2,788,381, equivalent to $6.16 a share on 338,158 shares of common stock outstanding. An item in the Wall Street Journal states that the consolidated report of the National Supply Company, including Spang, Chalfant and Company, which was acquired in June, will show a net profit of approximately $3,600,000 for 1930, equivalent to about $7.40 a share. Since the annual dividend amounts to $5.00 a share, it is seen that earnings will exceed dividend requirements by a margin of about 50 per cent.

This report is particularly interesting at this time, in view of the fact that curtailment of oil production has undoubtedly impaired progress of the equipment and supply manufacturers. While sales of oil field equipment by the National Supply Company have been handicapped to a considerable extent as a result of curtailment, this company's pipe line equipment plants are operating at a fair rate. In fact, the company's Etnas, Pennsylvania, plant is operating at full capacity, while the Ambridge, Pennsylvania, plant is operating at 50 per cent capacity. National Supply Company's plant at Dayton, Ohio, which manufactures couplings, miscellaneous pipe fittings and pipe of small dimensions, is operating at capacity. This shows that the slack brought about through a slump in oil well drilling has been offset by increased demand for pipe and pipe line equipment in the continued expansion of natural gas distribution facilities throughout the United States.

Gulf Coast and South Texas Fields

JACK LOGAN, *Staff Representative, Houston, Texas*

Darst Creek Potential Down 5574 Barrels Daily

SEGUIN, Texas.—In spite of the fact that more than 20 new wells have been completed at Darst Creek during the past six weeks, there has been in the meantime a decline of 5574 barrels in the daily potential of the area. The new proration schedule, Number 19, issued November 29, following eight-hour gauging of all wells in the field, shows the field to have a production potential of 165,804 barrels daily from 232 wells. Based likewise on eight-hour gauges, the field on October 12 showed potential of 171,378 barrels daily from 210 wells.

The new schedule limits the allowable production to 30,021 barrels daily, in accordance with an order of the Railroad Commission of Texas, and that amount represents 17.80463 per cent of the total potential. The schedule is to be effective until December 29, 1930.

The Texas Company again leads both in number of wells and in potential and earned allowance. Gulf Production Company ranks second in potential, although Humble Oil & Refining Company has the second largest number of wells. Following are totals taken from the new official proration schedule, showing the data by companies:

Producer—			
Abercrombie & Harrison	5	5,175	921
Cranfill-Reynolds Company	1	98	98
Empire Gas & Fuel Company	8	2,451	437
Gulf Production Company	44	35,580	6,334
Humble Oil & Refining Company	46	28,928	5,167
Louisiana Oil Refining Corporation	15	13,700	2,439
Magnolia Petroleum Company	39	16,749	3,033
Penn Oil Company	1	70	70
Stroube & Stroube	1	105	105
Sun Oil Company	12	17,139	3,052
The Texas Company	53	43,743	7,803
Dr. F. L. Thompson	1	.....	....
Trinity Drillers, Inc.	3	1,140	252
H. H. Weinert	1	80	80
H. H. Weinert et al	1	96	96
Witherspoon et al A. P. Mueller, Receiver, Strip	1	750	134
Field total	232	165,804	30,021

Note: Leases of 100 barrels production or less are not prorated.

Although the above schedule would limit the Darst Creek production to about 30,000 barrels daily, various producers last week and early this week were actually exceeding their allotments, and on December 2 it was estimated that production was running above 40,000 barrels daily.

Field Development

Efforts of The Texas Company to extend the main Darst Creek field to the northeast or else to develop crevice production as a southern extension of the Appling area have proved unsuccessful, the company's test, R. C. Appling 1, having tested dry finally in Georgetown lime at 2601 feet. The hole was abandoned at total depth of 2605 feet. This well had previously tested salt water from a crevice at 2408 feet.

While the above test was a failure, The Texas Company completed two other wells in the main field the past week which were oil wells. Knoblock 6-A on November 29 commenced pumping 625 barrels of 36 gravity oil and two per cent water at 2477 feet, and Pauline Roamel 4 began pumping on the same day at the rate of 1075 barrels daily, pipe line oil. The company following the above completions had no active tests, but made location for R. A. Parish 3, which was a derrick early this week.

Magnolia Petroleum Company has three operations in the field. Klein 5 is drilling at 1770 feet; Dix 15 late last week was drilling at 750 feet; and Rand Miller 7 was rigging up. Trinity Drillers' Rand Miller 2-B at the same time was drilling Taylor marl at 2025 feet. Gulf Production Company made locations for Dix-McKean 13 and 14.

Refugio Field is Extended One-half Mile East

Houston.—Completion of Mission Drilling Company's O'Brien 1 in the Refugio district marks a one-half mile eastward extension of the 6400-6500-foot producing sand of the east side of the field. The well was brought in November 29 for initial production of 677 barrels per day from the sand at 6449 feet. This well is now flowing 42 gravity oil through ¼ inch choke under a working pressure of 1400 pounds.

Two other completions were accounted for in the field with Royal Oil Company's Hornberg 1 being brought in for 300 barrels daily, at 5447 feet. Moody-Seagraves Producing Company's Rooke 1 in the south part of the field was abandoned as a dry hole at 6504 feet. Heep et al's No. 1 in Block 32 of the townsite tested salt water at 5450 feet and it is thought that the well will be drilled deeper in an effort to strike the pay sand at the 6400-6500-foot level. St. John 1 of the Moody-Seagraves Production Company, one mile south of the town, has been drilled to 6634 feet without success and will be plugged back to 5500 feet where it has a good showing of oil.

Another Barbers Hill Well Completed Through Salt

Houston.—The Barbers Hill field, Chambers County, furnished another instance the past week in which a well came in as an oil producer after drilling through a relatively great thickness of salt. This well, Humphreys Corporation's Kirby B-8, located on the northeast flank of the dome, came in flowing 92 barrels of 26 gravity oil per hour through a five-eighths inch choke and showing pressure of 330 pounds. Casing was cemented at 5289 feet, and the bottom of the hole is at 5295 feet.

In drilling the well a 920-foot thickness of salt had been drilled through, from 1631 feet to 2551 feet.

Aside from the above well there were two additional producers completed at Barbers Hill the past week, all three of the new wells registering combined initial production of 4300 barrels.

McAlbert Oil Company's Woodward 4, a workover, was

completed at 5316 feet for a flow of 800 barrels daily of 27 gravity oil. Yount-Lee Oil Company's Chambers County Agricultural Association 16, came in at 4733 feet flowing 1300 barrels of 27 gravity oil daily. E. W. Barber B-1 of the same company has been temporarily abandoned at 4267 feet, but will probably be drilled deeper in an attempt to strike the 5300-foot sand.

Republic Production Company's Kirby 3 on the east flank of Barbers Hill dome, has total depth of 6704 feet, and preparations are being made to pump the well to try for commerical production from sand and shale at that level. Sinclair Oil & Gas Company's Smith 2, an offset to No. 1, has had a good show of oil at 5664 feet. Sun Oil Company's Wilburn Fee 12 which is drilling in shale at 4987 feet, has been swabbing fluid at 3300 feet. This location is 100 feet west of that of No. 11, which was a small oil well.

Kerr County Promise New Production For South Texas

Houston.—Possibilities for the opening of a new commercial producing area for South Texas will probably be determined soon as work is progressing on the test, Evan et al's Jeff Love 1, in the western part of Kerr County. The well blew in after gas had been struck at 3347 feet, the second oil sand encountered during the drilling of the well. Sparks from the bit dresser's furnace ignited the well, the blaze being extinguished the following day. After rebuilding of the rig and other equipment has been completed the operators will set 6⅝-inch casing. Tools and about 3000 feet of cable will have to be fished out before casing can be set. Outcome of the test will not have any bearing on other tests that are being drilled in the county, sufficient showing having been found in this well to justify further exploration on the Edwards Plateau.

Second Duval County Well Drilling

Houston.—The Texas Company was drilling early this week in sandy shale at 1450 feet in its Duval County Ranch Company Fee 1, a 625-foot east offset to the wildcat producer, Duval County Ranch Company 1, of S. R. C. Oil Company and Vacuum Oil Company, in northwestern Duval County. An effort to extend the field to the southwest proved unsuccessful recently when the joint owners of the producers missed production in their No. 2, located only 575 feet west and 600 feet south of No. 1. It did not encounter the sand found in No. 1, although it was drilled to 1906 feet, whereas the discovery well is producing from sand at 1730-1736 feet. About six miles southwest of the wildcat producer Vacuum Oil Company has just started drilling its Duval County Ranch Company A-1. The discovery well discussed above is yielding about 200 barrels of 20.5 gravity oil daily.

First Well for Jim Wells County Completed

Houston.—The first successful completion recorded in Jim Wells County has opened another gas field for South Texas. Larero Gas & Petroleum Company's Wade 1 has been completed as a gas well for an estimated production of 40,000,000 cubic feet of gas. The gas sand was struck at 2910-2917 feet. Drilling in this county has been very irregular, very few noteworthy efforts having been made to locate production. Simms Oil Company drilled a well in this territory in 1926 with no success. Magnolia Petroleum Company abandoned a test on the Wadsworth survey in November of 1929 at 4190 feet.

Government Well Area Is Extended One and One-half Miles South

Houston.—Completion of Frasher et al's Bishop Duval Land Company 1, Section 135, Duval County, has extended the Government Wells area 1½ miles south. The well was brought in from sand at 2302 to 2308 and flowed 600 barrels the first 6½ hours through ⅞ inch choke. After the initial flow the well started flowing by heads and is making an estimated daily production of 1650 barrels.

This is the best producer of the Government Wells (or Schoolfield-O'Byrne) area, the best wells of the original pool 1½ miles to the north having registered initial production of around 1000 barrels daily. The extension well is said to be 60 feet higher on structure.

R. F. Schoolfield and E. R. Thomas, both of San Antonio, are interested in this well, and they are reported to control about 1000 acres around the producer.

Magnolia Pipe Line Company is laying a line to the new well, but has agreed to take only a limited amount of oil from it.

White Point Discovery Well Flowing 124 Barrels Daily

Houston.—Saxet Oil Company's Rachal 17, discovery oil well of the White Point field, San Patricio County, during the 24 hours ending at 7 a. m. December 2 produced 124 barrels of high gravity oil, along with gas. Pressure on the casing was 1580 pounds, and on the tubing 1250 pounds.

Located in the northeast corner of the John Seguin Survey, this well is near the center of the proven gas area. It came in originally as a gas well at 4878-4892 feet but subsequently began spraying some oil.

In the Saxet field, a few miles west of White Point, across Nueces Bay in Nueces County, Saxet Oil Company's Dunn 6, discovery oil well of that field, is producing around 35 barrels of net oil daily along with a large volume of salt water.

Saxet Oil Company and Saxet Gas Company, owned by the W. L. Pearson interests, Houston, control most of the Saxet field, and they also have extensive holdings at White Point, the acreage there aggregating about 2000 acres, most of which is in a large block around the above mentioned discovery oil well.

East Hackberry Has Two Wells Completed for 1512 Barrels

Houston.—East Hackberry field in the Louisiana Gulf Coast again leads in number of completions and initial production for the week with two wells completed for a total of 1512 barrels daily. Calcasieu Oil Company's Watkins 22 was completed at 2855 feet after casing had been set at 2827 feet and two joints of 4½ inch screen had been set in the sand. The well came in flowing through three-inch drill pipe for initial production of 1300 barrels per day. The oil from this completion is 22 gravity with a temperature of 90 degrees. Production is now flowing through one-half inch choke with a pressure of 250 pounds.

Calcasieu Oil Company's State Kelso Bayou 1 in the East Hackberry field was completed for 200 barrels of 23 gravity oil from a depth of 4084 feet. The well is now flowing through one-half inch choke with a working pressure of 310 pounds per square inch.

Louisiana--Arkansas Field Notes

Zwolle Well Connects Two Southern Extensions

SHREVEPORT.—A flowing well which is a connecting link between two southern extensions of the Zwolle, Louisiana, field of Sabine Parish, was completed Saturday night, November 29, when Pelican Natural Gas Company completed Sabine Lumber Company 6, NW NE NE Section 11-7-12, in the Zwolle chalk at total depth of 2343 feet, flowing at the rate of 3000 barrels of light gravity oil daily through a seven-sixteenth-inch choke. Zwolle marl was topped at 2311 feet and six-inch casing was set two feet above the contact.

This well is 660 feet east of the same company's Sabine Lumber Company 4, in the same section, whose yield was materially reduced by completion of the new well. Sabine 4, which was completed several weeks ago as a mile and a half southern extension of the East Zwolle field. The new producer is in the direction of the four-mile southeastern extension field where there are now five producers, this field having recently been extended a quarter of a mile southwest by The Texas Company's Maines 1, NE SE Section 5-7-11, which is now making 149 barrels of oil by heads from total depth of 2341 feet.

Five miles northeast of production in the Zwolle east field proper, Eylers Oil & Gas Company's Fraser 1, NW SW Section 10-8-11, is checking more than 200 feet geologically above the discovery well of the east field, and has set casing for a test after a show of oil in sandy shale above the top of the Zwolle marl, which was encountered at 2160 feet, surface elevation of the test being 317 feet; 8¼-inch casing was set at 2150 feet and the well may drill in this week.

Another well in the southeast extension of Zwolle giving promise of becoming a producer is Pelican Natural Gas Company's Louisiana Long Leaf 6, NW SW Section 4-7-11, which made two heads of oil, and is standing with 2000 feet of oil in the hole at 2347 feet, six-inch casing having been set at 2291 feet. Packer is being set.

An edge well on the northeast side of the East Zwolle field was abandoned as a dry hole during the week by Standard Oil Company of Louisiana in Bowman-Hicks 1, Section 25-8-12, which was abandoned in the Zwolle chalk at 2713 feet. Zwolle marl was topped at 2360 feet and 6⅝-inch casing was set 10 feet above that depth.

Four miles south of Zwolle southeast field production, Lohman and Walker have abandoned Hubley 1, Section 21-7-11, as a dry hole in the Zwolle chalk at 2550 feet; six-inch casing was set at 2432 feet. This well had shown considerable gas in two feet of sand at 1354-56 feet, resulting in eight-inch casing being set at 1235 feet. However, the well bailed dry at the shallow depth.

Two new locations were announced in the southeast part of the Zwolle field during the last week. The Texas Company has run derrick pattern for Stoker 1, NW SE Section 10-7-11, and Pelican Natural Gas Company has made location for Louisiana Long Leaf 7, NW SW Section 10-7-11.

Out-of-State Operators Are Attracted to Louisiana

Shreveport.—Several out-of-the-state operators have recently made locations in Zwolle and other wildcat areas of North Louisiana. As Louisiana and Arkansas are two states not having a proration schedule, stringent limitation in other states may send other operators into this territory.

North Louisiana and South Louisiana at present have a daily average yield of approximately 65,000 barrels, and Dr. J. A. Shaw, director of the minerals division of the Louisiana Conservation Commission, says that no proration schedule is contemplated for Louisiana, unless the daily yield reaches the 200,000 barrel mark.

One new entry in this territory is Gehrig Company, Tulsa, which has spudded in Miller 1, NE SW Section 16-18-10, Webster Parish, several miles southeast of the Bellevue field, and has just set 12½-inch surface casing at 200 feet. Prairie Oil & Gas Company, another new entry in this territory, drilling a 5000-foot wildcat test in northeast Claiborne Parish, is drilling gumbo at 2088 feet in F. B. Shackelford 1, SE NE Section 30-23-5w.

One Pumping Well Completed in Arkansas

El Dorado, Ark.—Only one producer was completed during the week ending November 29 in Arkansas. This was Malloy & Company's Burns 7, NW NW Section 31-17-15, Union County, a semi-wildcat, which was standardized at 2213 feet, pumping 15 barrels of oil daily free of water.

J. E. Crosbie, Incorporated, and associates, who are drilling a 4500-foot test on the southwest flank of the Smackover field, are coring at 2835 feet in G. L. Murphy 1, SW NW Section 13-16-16, Union County.

Red Bank Oil Company is plugging back to 3050 feet in Hamm 1, Section 33-10-26w, Franklin County, Northwest Arkansas, recently completed at 3750 feet as a 6,500,000-foot gasser, the deepest commercial well in Arkansas. Later tools were lost at bottom of the hole.

With E. & F. Oil Company's E. L. Beck 1, Section 36-15-26, Miller County, Arkansas, still waiting for a short string of 4½-inch casing to set, to test four feet of sand at total depth of 2951 feet, only two tests are now drilling in that county where there was a flurry of wildcatting following completion of a small producer last summer.

Three tests in Champagnolle, Union County, which recently added a flowing well after being inactive for several months, are nearing the 2800-2900-foot horizon where pay should be encountered.

Bienville Parish Test Shut Down

Shreveport.—Triangle Drilling Company and associates whose McDermott 1, Section 28-18-6w, a wildcat in Bienville Parish, showed oil in the Nacatosh at 2258 feet, and was later deepened to 3160 feet without getting pay, and whipped stock at 2060 feet, tested dry at 2176 feet, is now shut down awaiting orders. In the same area Olds and Smith are arranging to abandon Brice 1, Section 15-16-6w, after bailing to within 1000 feet of bottom without a show

Another "American" Installation

Illustrated above is an installation with a No. 3 "American" individual pumping unit showing use of Tex-rope drive. This unit is adaptable for 18″ or 22″ stroke. It is furnished for belt drive or drive as shown.

The "American" individual oil well pumping unit is made in six sizes. They are compact and have few moving parts. All gears and pinions are oil immersed. All of the bearings except two are automatically lubricated. The power consumption is small and the units are easily counter-balanced.

All of these units give a straight lift on the polish rod and the special mule head and cable sling protect the unit in case of well sanding.

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at total depth of 2230 feet, 6⅝-inch casing having been set at 2156 feet.

In the Spider district of De Soto Parish, Arkansas-Louisiana Pipe Line Company abandoned Johnson 3, Section 1-11-14, at 3190 feet. North of production in the Holly field of the same parish Standard Oil Company of Louisiana encountered 13 feet of broken sand from 2813 to 2826 feet in Dowling Brothers 1, SW SW Section 32-14-13, and has set 6⅝-inch casing at 2813 feet. A wildcat test in that Parish was announced during the week in C. D. Neff and associates' Ramsey 1, Section 33-13-16, where derrick is up. J. M. Bridges, Trustee, made location in that parish for Cook 1, Section 16-10-11.

Louisiana-Arkansas Division to Elect Officers for 1931

Shreveport.—The Louisiana-Arkansas division of Mid-Continent Oil and Gas Association will hold its annual election of officers and executive committee at 10 a.m., Monday, December 8, at the division office here, according to Joseph B. Elam, executive secretary. C. R. Minor of Gulf Refining Company, is now president of the division.

Abandon Homer Field Test

Shreveport.—Louisiana Oil Refining Corporation, drilling a 4000-foot test in the old Homer field of Claiborne Parish, in Langston 10, Section 19-21-7w, was forced to junk hole at 661 feet and skidded 10 feet west and spudded a new hole which is drilling below 144 feet.

Shelby County, Texas, Test is Shut Down

Shreveport.—In Shelby County, East Texas, G. R. Ridgeway's Parker 1, Jesse McKelvey Survey, which had a blowout of mud in a break in sandy lime at 3015 feet, under two feet of cap rock, tested salt water when opened and is shut down waiting orders.

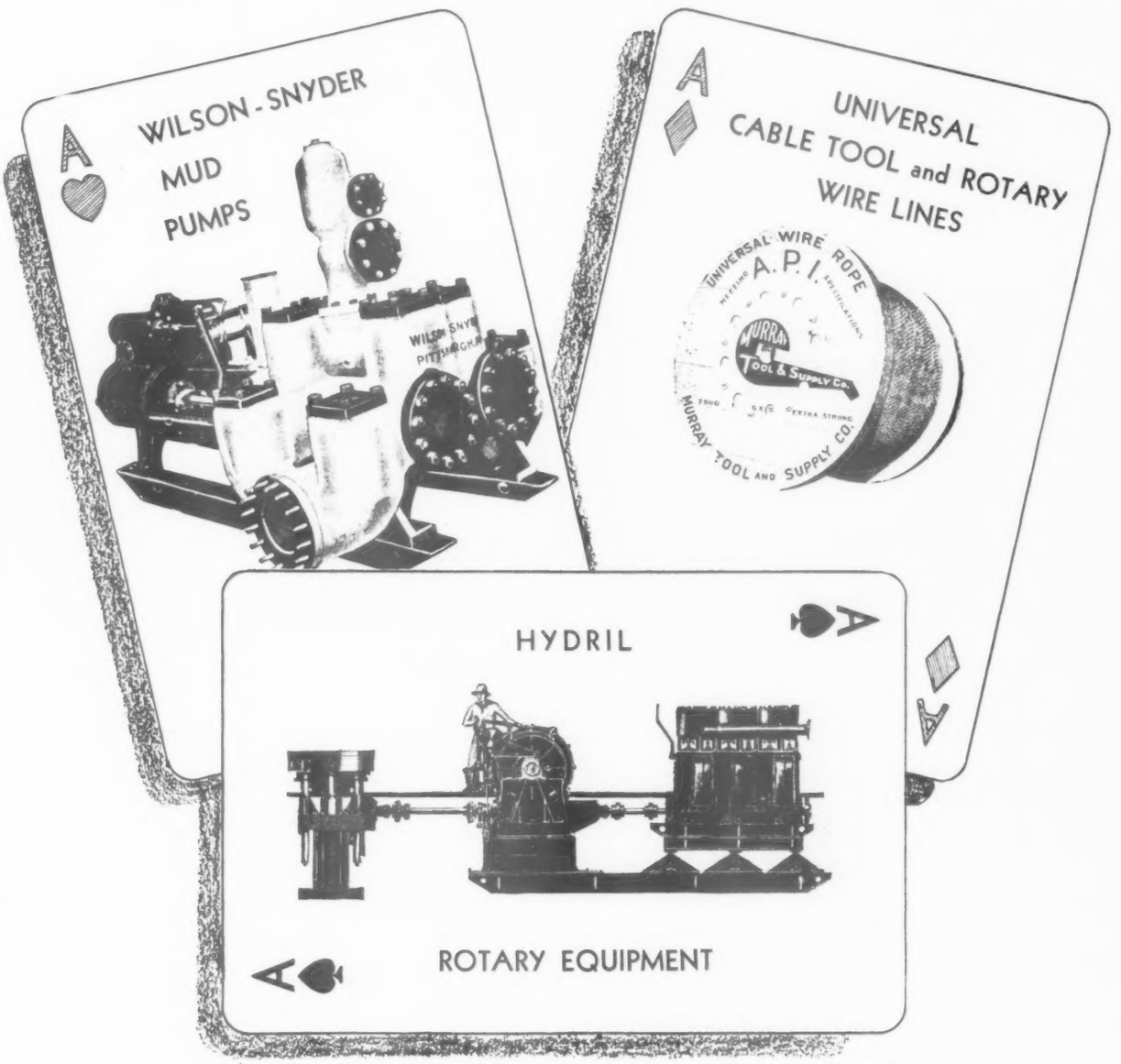
Loring Oil Company's Nona Mills Lumber Company 1, James Mason Survey, Sabine County, Texas, six miles south and a mile west of the West Zwolle, Louisiana, field, is coring at 4512 feet, after having cored a lime formation at 4404 to 4423 feet which showed a trace of oil.

Arkansas-Louisiana Pipe Line Company, drilling for the upper Trinity in the old Bethany gas field of Panola County, Texas, where there are now two gassers in the deeper pay, after having to junk the first hole in Brumble A-2, B. C. Jordan Survey, in the second hole has set seven-inch casing at 4480 feet. In the same field The Texas Company is drilling shale at 2260 feet in G. W. Brumble 3, in the Evans Bracken survey, an old well being deepened.

Rights of Lessor to be Tested

Los Angeles.—Asserted failure of The Texas Company to operate a lease in the Mt. Poso field to capacity has lead to a suit in the Superior Court, with The Texas Company asking for declaratory relief because there is already a nationwide overproduction of oil. The government leases in question are held by Dwight G. Vedder, and previously the leaseholder had contended that The Texas Company had failed to operate the leases to capacity and was in default. The producing company countered with a suit to prove that in the face of overproduction it is unwise to produce more oil than will find a suitable market. The outcome of the suit will have a far-reaching effect upon the rights of lessors to demand capacity operation of leases when such practice seems opposed to the best interests of curtailment.

NOT ONE but THREE



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Jackson Gas Field Adds Two More Producers

JACKSON, Miss.—Two additional gas producers were completed during the week ending November 29 in the Jackson gas field, one being in Hinds County and the other in Rankin County.

In the northwest edge of the Hinds County part of the field, Mississippi Petroleum Company's Baptist Orphanage 1, SE SE Section 28-6-1e, was completed at 2505 feet, making 25,000,000 cubic feet. Midway shale was topped at 2422 feet and 6⅝-inch casing was set at 2481 feet. This well is a southeast offset to Louisiana Gas & Fuel Company's Toole 1, in the same section, one of the early gassers in the field.

Pioneer Oil & Gas Company's Graves 1, NE SW Section 12-5-1e, Rankin County, was completed at 2402 feet, estimated at 40,000,000 feet. Elevation is 268.8 feet. Midway shale was topped at 2301 feet and Midway chalk was topped at 2391 feet. This well is between two gassers.

Universal Oil & Gas Company's holdings in Jackson field have been seized by the sheriff for sale to satisfy a judgment, including drilling tests, both of which had been shut down for some time. This company's Holliday and Ross 1, NW SW Section 8-6-2e, Hinds County, was abandoned as a dry hole at 2653 feet, still in the Wilcox. The same company also had drilled Sharbrough 1, SW SE Section 28-6-1e, to 88 feet where 10-inch surface casing had been set.

Gulf Refining Company has a fishing job in Hamilton Estate 1, SW SW Section 4-5-2e, Rankin County, two miles northeast of production, and which checked low. Four-inch drill pipe stuck at 2975 feet while reaming was under way at total depth of 3049 feet and lubricating to unloosen the pipe is now under way.

Show of Oil

Capital Oil & Gas Company report that oil of heavy gravity is appearing with the gas from Brown 1, SW SE Section 28-6-1e, which is used in a nearby drilling test, may result in the well being standardized with the idea of perforating casing above the Midway chalk which was set at 2496 feet. Louisiana Gas & Fuel Company's Toole 1, in the same section, is reported to have had an oil show before hitting the Midway chalk and bringing the test in as a gasser.

Love Petroleum Company's Maley 1, SE NW Section 15-5-1e, Hinds County, is blowing uncontrolled into earthen storage making 10,000 barrels of salt water, from 5,000,000 to 10,000,000 feet of gas daily, and about 100 barrels of badly cut low gravity oil. No plans have been announced for shutting in the well.

One new location was made in the Jackson field during the last week, this being Feazel Oil & Gas Company's Cox 1, Section 12-5-1e, Rankin County, about 1000 feet east of Pearl River Oil & Gas Company's Littlefield 1, a gasser in the same section. Derrick is up for the test.

Mississippi Gulf Oil & Gas Company has moved derrick pattern on its location for a wildcat in Covington County, near Collins, South Central Mississippi. The test is Pope 1, SE NW NE Section 35-8n-16w, on the Pope land. This company has a 30,000-acre block.

Derrick is up and rig will be moved immediately for a test in SE SE Section 29-11n-12e, Neshoba County, Central Mississippi, 75 miles northeast of here, for a test on a 50,000-acre wildcat block held by J. C. Williams and associates of Pennsylvania.

BUREAU OF MINES REPORTS

(*Continued from page 70*)

Field studies of repressuring methods were made in the fields of Salt Creek, Wyoming, Burbank, Oklahoma, and north central Texas. Although the methods used in the different fields vary according to local conditions, repressuring has been found successful in every installation studied. On some properties, a definite increase in oil production is noted; on others, oil production stays almost constant, whereas without the use of gas it would probably have decreased.

Report on Williams Pool

A detailed report on the Williams pool, Callahan County, Texas, was completed. This study was made primarily to determine the effect on production of repressuring with air a lenticular sand body of low initial production, which originally contained little gas and in which the gas-oil ratio always had been relatively low.

The Williams pool, with 61 producing wells and nine input-pressure wells, showed an estimated gain in production, over what would have been expected from normal production, of 33 per cent under repressuring methods during 1927, 78 per cent in 1928, and 76 per cent in 1929. The average initial daily production of wells in this pool was 12 barrels. The estimated net increase for the field over the 3½ year period was found to be 57,500 barrels, or 44 per cent.

Other field studies, relating to gas injection and underground gas storage, are in progress in California and the Appalachian fields.

A bulletin on paraffin problems and the related problems of congealing oil has been completed. During the last year the work has been directed to determining the action upon paraffin of various solvents derived from crude oil with and without natural gas in solution.

Investigation to determine an economic method for the disposal of saline oil-field waters, with special attention to the possibilities of obtaining certain salts in such quantities as to convert a present waste into an economic asset, was continued, covering the study of rare elements in oil-field brines, also on methods for determining sodium and potassium in brines. Some work was done on the determination of iodine and bromine.

Seek Rail Branch for Oil Pipe Line Terminus

Casper, Wyo.—Another development which may lead eventually to an oil pipe line to serve the shut-in fields in the western Big Horn Basin in Wyoming is the request made by the Department of the Interior to the Interstate Commerce Commission to intervene in the hearing for a branch railroad to serve the Riverton, Wyoming, reclamation project. Continental Oil Company has said that it would lay a pipe line from the Big Horn basin fields if it could be assured of a railroad terminus within reasonable distance.

Spur Track for Carbon County Oil Field Sought

Helena, Mont.—Construction of an industrial spur track to the Carbon County oil field is asked in an application with the state board of railroad commissioners here by Kirk & Arnot and by Frannie Oil Company of the Chicago, Burlington & Quincy Railroad. The Carbon County field has but recently been discovered. The projected spur would serve the Frannie oil field in northern Wyoming as well as the new Dry Creek district.

New Law Suggested to Control Oil Production

NEW YORK, N. Y.—Regulation of pipe line building to new oil fields is a suggestion recently received by E. B. Reeser, president of the American Petroleum Institute, in a letter from James G. Stanley, former director and general counsel of Continental Oil Company, (Maine), now president of Plaza Investment Company, New York.

Mr. Stanley has suggested the creation of a Federal agency, like the Federal Oil Conservation Board, with jurisdiction over interstate commerce transactions and a state agency having jurisdiction over intrastate matters should be created with full powers:

1. To issue certificates of "convenience and necessity" upon application by pipe line companies desiring to construct a pipe line to a new field.
2. To deny such application, after hearing, if in the judgment of the board, public interest will not be served by such pipe line.
3. To prescribe and enforce rules and regulations with respect to unit development and operation or of oil structures to which pipe lines have been authorized to be built.

Mr. Stanley goes on to state that a law as suggested above would work no hardship on any one. Every wildcat operation would be carried on with full understanding that if oil were discovered it could not be taken to market until there should be economic demand for it. Every lease given or taken after such a law is in effect would be subject to the prescribed regulations of the state board requiring unit development and operation. Mr. Stanley points out that such a law would not prohibit the drilling of prospective oil fields, but would eliminate much of the reckless abandon which now exists in wildcat operations and certainly would stabilize the industry by bringing production to a basis where it would supply market requirements only in response to economic needs of the nation.

Mr. Stanley states that the present interstate commerce act and some of the state laws creating state railroad commissions, there is a provision which, if applied to the oil industry through the medium of pipe line transportation could hold future exploitation within bounds and insure a stability which would bring the industry out of its depression quickly. Under the federal and state commerce acts as applied to railway companies no new line or railroad can be built unless first a "certificate of convenience and necessity" is obtained from the Federal or state commission or both.

Failures Further Remove Threat Of Sullivan Area

Amarillo, Texas.—Flush production threat offered by the Sullivan area in western Gray County became further removed during the past week when additional tests drilled past the expected oil horizon without making producers. J. T. Harrell and others (was Taconian Oil Company)'s Sullivan 1, which uncovered the area several months ago with a potential flow of 10,000 barrels high gravity oil daily at 2990 feet, has decreased to about 3200 barrels daily, with a flow of 30,000,000 cubic feet of wet gas. This unusual well is now believed to be a freak, since direct offsets proved dry, and has been costly to other operators, who started 15 tests within a mile radius.

Failure of Magnolia Petroleum Company's Latham 1, two locations west of the Sullivan discovery well, to show for a producer after drilling to 3015 feet early this week dimmed the chances for other active tests to score big production, as the former is about 20 feet higher on structure. Latham 1 encountered unusually hard drilling, as has been the experience of other nearby tests, while a heavy flow of gas was developed after logging first granite wash formation at 2880 feet. Latham 2 was drilling at 2585 feet early this week.

Phillips Petroleum Company's Barrett 1, located a short distance northwest of the producer, likewise proved dry after drilling below 3010 feet. This test found a hard layer of granite at 2940 feet. The same company's Barrett 2 is drilling below 2690 feet. Empire Gas & Fuel Company's Sullivan 1, an east offset to the Sullivan producer, gave promise of making a small oil producer with 2,000,000 cubic feet of gas at 3290 feet, but failed to increase when deepened into lime at 3370 feet. This company's McCullough 1 is fishing at 2025 feet. The Texas Company's Brown 3, located more than one-quarter mile north of the discovery producer, missed the expected horizon, but is showing for a 100-barrel pumper from lime at 3250 feet. Progress on Skelly Oil Company's Heitholt 1 has been delayed by a fishing job at 2918 feet, while Midgray Oil Company's McCullough 1 is making 5,000,000 cubic feet gas at 2575 feet.

MARKET SECTION
(*Continued from page 64*)

its crude takings are to be near normal level. Action taken by Cosden Oil Company was ordered by its receivers, who nominated 6000 barrels daily as being the company's requirements during the December proration period.

Refusal of producers to accept Cosden Oil Company's reduced price schedule is believed to have headed off a general price cut by all purchasers, while similar reductions would likely follow in Ector, Crane and Upton Counties. Most of the crude produced in the latter counties is not very popular with buyers, and their individual purchases are very limited. The production allowance in the Howard-Glasscock County district is being re-adjusted to divide the market offered by other buyers equally among producers until price differences with Cosden Oil Company are straightened out and a cut in production will be necessary.

Cosden Oil Company is competing in refined oil markets with plant owners in North Texas and several points in Oklahoma that obtain crude supplies at buyers prices. The latter group are obtaining Mid-Continent grade crudes at prices that are on a par with those being paid by Cosden Oil Company for lower gravity sulphur contaminated crudes in West Texas.

The crude market in West Texas is controlled in such a manner that independent refiners are not likely to dictate prices.

Lower price levels are being sounded by gasolines and burning oil in the North Texas refining centers. Trading in the former commodity has tapered off, while high cold test fuel oil stocks are accumulating in refiners storage in burdensome quantities even though price quotations have been shaded repeatedly. Efforts to advance prices on gasoline in the face of a dull market lately have about been abandoned, and many plant owners are accepting 4¼ to 4½ cents per gallon for U. S. motor gasoline. North Texas refiners are quoting high cold test fuel at 35 to 45 cents per barrel, while the same commodity is available in West Texas at 25 cents.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ELWOOD—		
Barnsdall Oil Co.-Rio Grande Oil Co., Doty 7	350	3480
FRUITVALE—		
L. C. Osborn, Forney 1	250	4065
LONG BEACH—		
Adams & McFadden, Bruce 1	200	7465
Allied Pet. Corp., Garrison 3	550	4780
James Oil Co., No. 6	300	7550
Richfield Oil Co., Booth 15	25	5410
West American Oil Co., No. 1	400	4755
Zenith Oil Co., Miley 2	500	7735
PLAYA DEL REY—		
Frank D. Allen, No. 1	450	4210
Bartley Pet. Co., Venice 1	460	4570
Beverly Hills Pet. Corp., Burkholder 2	175	4490
Mohawk Oil Co., No. 2	350	4790
Royal Oil Co., No. 1	375	4215
Tideland Oil Co., No. 1	350	4540
Venice Oil Syndicate, No. 5	400	4290
Venice-Pacific Oil Co., No. 1	800	5755
California Northern Corp., Lind Blade 4	400	4500
RINCON—		
Chanslor-Canfield Midway Oil Co., Hobson B-12	150	3625
VENTURA—		
Shell Oil Co., Taylor 58	600	5580

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Empire O&R, Koogler 103, ne c sw 20-26-5e	40	2539
Empire O&R, Houston 21, nw sw sw 19-26-5e	130	2638
DOUGLAS COUNTY—		
Steinbuchel et al, Elder 1, sw ne nw 33-14-21e	*	995
ELLIS COUNTY—		
Phillips Pet., Herman 1, ne c 7-12-17w	125	3719
Davis and The Texas Co., Perschenk 1, nw ne se 1-13-16w	*	3220
McPHERSON COUNTY—		
Larto O&G and Shell, Miller 1, se c 1-20-2w	1090	2961
Mid Kansas O&G, Garrett 1, sw c ne 30-19-1w	3325	3407
RENO COUNTY—		
Alco Royalty Co. et al, Kinney 1, se c 16-22-7w	*	3932
SEDGWICK COUNTY—		
Seigel Bros., Soukup 1, se c ne nw ne 19-27-2e	800	2975
Magnolia Pet. Co., Brady 1, nw c 29-27-2e	*	3405
Eisenhour et al, Montgomery 1, nw c sw 19-27-2e	*	1025
STEVENS COUNTY—		
Western Prod. Co., Webber 1, c nw 13-32-38w	¶4	2584
Western Prod. Co., Ponder 2, c nw 10-32-38w	¶7	2523
W. R. D. Fee 4, c ne 6-33-36w	¶4¼	2583
Shaffer 1, c sw 5-33-38w	¶4½	2520
Webber 2, c ne 9-33-37w	¶5½	2518
SUMNER COUNTY—		
Fred Morgan et al, Myers 1, (owdd) sw c 16-35-2e	50	3350
Magnolia Pet. Co., Shiner 1, nw c sw 9-33-2e	*	3700

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO COUNTY—		
Simms Petroleum Co., Cobza 1, sw c nw 24-6-11w	*	4256
CARTER COUNTY—		
Magnolia, Dickerson 2, sw se ne 24-1s-3w	2470	1935
CLEVELAND COUNTY—		
I.T.I.O. et al, Reynolds 2, se ne nw 6-10-2w	*	6777
COMANCHE COUNTY—		
K. D. Drilling Co., Cox 1, ne c nw 24-2n-10w	*	1310

For Tabulation and Comparison See Market Section

Company, Well and Location	Initial Production Bbls.	Depth
K. D. Drilling Co., Corry 1, ne se se 23-2n-10w	*	1350
CREEK COUNTY—		
Gled Oil Co., Bruner 2, nw sw nw 31-19-8e	*	2788
Turner Bros. & Savoy Oil Co., Barnett 1, ne se nw 9-16-12e	¶1	1788
Tim Cushing et al, se f 1, nw c se nw 12-17-8e	5	3010
J. H. Wright Estate, Cartwright 1, cel sw 19-17-11e	¶1½	2400
F. D. Murta et al, Stewart 2, ne c sw nw 32-17-12e	40	2398
Tidal Oil Co., Pigeon 2, ne c se se ne 36-19-7e	100	2500
HUGHES COUNTY—		
W. E. McCraw O&G, King 1, c sw ne 11-1n-8e	*	3045
KIOWA COUNTY—		
O. B. Riley, Grebb 1, sw c ne 6-7-16w	*	1472
MUSKOGEE COUNTY—		
Moore & Crow, Hood 1, c se sw 31-12-19e	*	703
O. A. Sewell et al, Stidham 1, se c sw nw 4-14-17e	*	1751
OKLAHOMA COUNTY—		
Wirt Franklin Pet., Page 3, se sw se 35-12-3w	2347	6220
Oils Inc., Moreland 1, ne c sw nw ne 2-11-3w	9633	6205
Oils, Inc., Ross 1, se nw nw 2-11-3w	51945	6261
Hall & Briscoe, Holmes 5, sw nw se 10-11-3w	54155	6420
J. E. Mabee et al, Schilling 1, se ne sw 10-11-3w	13120	6517
Skelly Oil et al, Tanner 2, ne se ne 10-11-3w	27660	6268
I.T.I.O. et al, Trosper 2, nw c ne 14-11-3w	3664	6450
Lawrence Place 3, c e2 w2 ne 15-11-3w	5875	6352
Coline Oil Co., Clauer 14, nw ne se 25-11-3w	425	6270
I.T.I.O., Oklahoma State 6, sw ne nw 36-11-3w	1025	6505
OKMULGEE COUNTY—		
Whitcomb, Harris 2, sw c ne ne 1-14-14e	¶1	627
Speary Bros., Simmons 1, cnl nw nw 29-15-12e	¶1	1058
A. W. Cline, Harrison 2, c se nw 19-15-14e	¶3	1684
OSAGE COUNTY—		
Turman Oil Co., 4, se sw sw 11-21-8e	175	2292
Continental Refg. and Prairie 6, cel w2 ne se 5-23-9e	75	2111
Devonian Oil Co., 1, ne nw ne 33-22-11e	*	1706
PAWNEE COUNTY—		
Flynn & Morgna, Freeman 1, nw c 1-20-5e	*	3678
PAYNE COUNTY—		
Carter Oil Co., Crow 6, sw se ne 14-19-5e	*	3553
Pure Oil Co., Kennedy 2, se ne nw 9-18-5e	¶5½	2648
PITTSBURGH COUNTY—		
Central States Light & Power, Carney 2, sw c ne 9-7-18e	¶14	1755
POTTAWATOMIE COUNTY—		
Lippa Drlg. Co., Rouse 1, nw ne sw 20-9-5e	50	4202
Twin State Oil Co., Sowers 2, ne nw se 32-6-3e	55	3395
Sowers 1, sw nw se 23-6-3e	160	3429
I.T.I.O., Davidson 7, sw se nw 23-6-3e	455	3464
Empire O&R, Alexander 2, nw sw se 23-6-3e	125	3431
Payne et al, Bullock 1a, se c ne 22-6-3e	1920	3485
Pure Oil Co., Case 2, se c sw 14-6-3e	1870	3621
SEMINOLE COUNTY—		
Amerada Pet. Corp., Tiger 2, sw se nw 3-8-5e	2995	4028
Empire O&R, Brown 2, ne c se 3-8-5e	2445	4120
Sinclair O&G, Caesar 2, sw nw se 29-6-6e	710	2672
Empire O&R, Fish 2 "A", sw se ne 19-7-8e	890	3092
Deep Rock Oil Corp., Douglas 1, ne c sw 30-8-8e	*	1484
STEPHENS COUNTY—		
Pace et al, Green 1, "B" nw c se ne 2-2s-8w	*	2215
Harry Hanbury, Farmer 1, se nw ne 31-1s-8w	*	2805
TULSA COUNTY—		
Byrne & Green, Boulton 2, sw c se ne 28-18-14e	*	1402
Gallo Bros., McIntosh 1, se c nw 1-19-14e	*	1233
WAGONER COUNTY—		
May Drlg., Co., Kelly 1, nw c sw 10-18-16e	*	1143
R. L. North, Austin 1, se c nw se 31-18-17e	¶4½	900

EASTERN STATES

PENNSYLVANIA

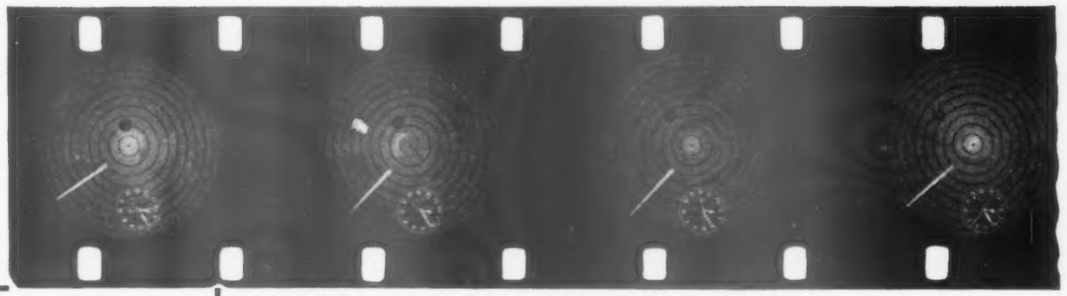
Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
T. P. Thompson, Jr., Borden 17	3	....
W. H. Emery, Clark 1	2	....
WASHINGTON COUNTY—		
Manufacturers Light & Heat Co., Earley 3440	*	....
Hopewell Oil & Gas Co., Buchanan 2	*	....
ALLEGHENY COUNTY—		
Groveton Oil Co., Young Hrs. 1	*	....

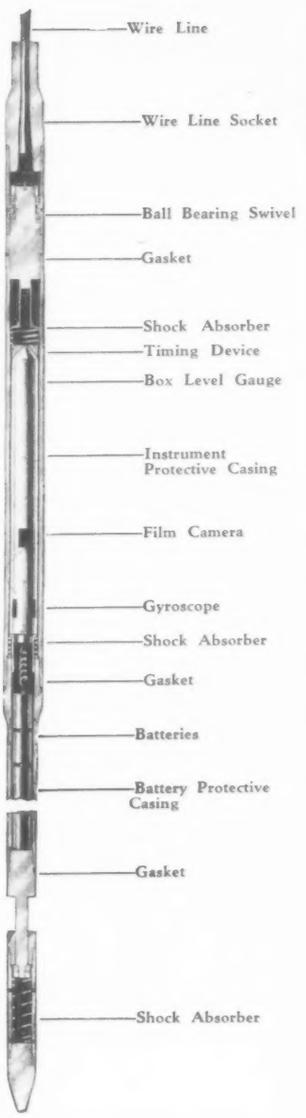
WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
MARSHALL COUNTY—		
Moore-Tex Oil Co., Tennent 1	¶½	2923
Fry & McCracken, McGinnis 3	¶¼	1597
WETZEL COUNTY—		
Burton Development Co., Hoge 1	¶¼	2087
West Virginia Gas Co., Haskins 5219	*	3233
BOONE COUNTY—		
G. L. Cabot, Inc., Arbogast 7	¶¼	3670
Federal Coal 44	*	2903
MARION COUNTY—		
Owens-Illinois Gas Co., Ice 1	¶¼	3032
CABELL COUNTY—		
Wilson & Mowery, Frazier 1	¶1	3305
KANAWHA COUNTY—		
Allegheny Gas Corporation, Bradford & Co. 6	¶¼	1182
MONROE COUNTY—		
United Fuel Gas Co., Holstein 4209	*	1187
CLAY COUNTY—		
G. L. Cabot, Inc., Blue Creek Coal Co. 1	*	2600

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
ISABELLA COUNTY—		
Ohio Producing & Ref. Co., Wezenski 2	100	....
Epple 80-a 1	200	....
Epple 40-a, tr. 2	200	....
The Pure Oil Co., Roebuck 3	150	....
Mt. Pleasant Oil & Gas Co., Thompson-Bortz 3	100	....
Geneva Oil Dev. Co., Nicholson 1	¶1	1363
J. O. Duryee, Johnson 1	*	4595
Unknown Parties, McMananama 1	*	....
Adams 1	*	....
Mitchell 1	*	....
Menerey 1	*	....
Graham 1	*	....
Ostrum 1	*	....
Cooley 1	*	....





PHOTOGRAPHS TELL THE STORY

At short intervals, as a *SURWEL Gyroscopic Clinograph* is lowered into the drill hole, a light flashes—a picture is made. Those pictures tell the story of just where you are going.

If you're off the vertical they tell *accurately* how much. But they tell *more*—*more* than you can find out by any other method, i.e. the *actual direction of the deviation.*

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SURWEL Clinograph

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
OHIO COUNTY—		
Kentucky Natural Gas Co., Reynolds 4	¶¼	....
Fletcher & Co., Edge 1	*	750
J. C. Ellis & Co., Coleman 1	75	....
Smith 1	100	....
HENDERSON COUNTY—		
Jerry Oil Co., Griffin 4	3	....
McLEAN COUNTY—		
The Ohio Oil Co., McManama 3	50	1138
WAYNE COUNTY—		
M. D. Shearer, Coyle Hrs. 6	*	....
LEE COUNTY—		
First Nat. Bank of Jackson, Trabue Hrs. 6	7	....
Petroleum Exploration Co., Trabue Hrs. 8	35	....
MAGOFFIN COUNTY—		
Cumberland Petroleum Co., Bailey 45	5	....
Hupp, Duff & Co., Frazier 10	10	....
Peoples Pittsburg Trust Co., Wheeler 3	3	....
ESTILL COUNTY—		
Cox & Gabbard, Evans 4	1	....
Evans 5	1	....
McEldowney, Bowser & Co., Reed Hrs. 8	*	....
R. R. French & Co., Fowler 1	*	....
Benton & Co., Srivener 1	*	....
Edwards & Withers, Flynn 1	*	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
NOBLE COUNTY—		
Shay McMullen, Hunt 1	¶¼	1693
MORGAN COUNTY—		
Woodyard & Co., Woodyard 20	¶¼	1691
Williams Bros., Hann 2	¶¼	1645
Ohio Fuel Co., Barkhurst 2	¶¼	1459
Wood 2	¶¼	925
WASHINGTON COUNTY—		
The Pure Oil Co., Reed 21	*	953
McTaggart & Co., Reed 1	¶¼	1161
Anderson & Co., Greenlee 4	¶2	1138
Wickers & Co., McIntyre & Co. 2	20	1243
Anderson & Co., Rowland 9	3	560
Rowland 10, 11, 12, 13 and 14	*	562 to 700
Rowland 15	1	562
Van Fleet 5	1	585
Van Fleet 6	*	558
Turney & Co., Lizzie Hale 2	*	485
Lizzie Hale 3	*	488
C. M. Smith, Gearhart 9	¶¼	640
Minard & Graham, Edward 16	*	1530
Sandy Wiper & Co., Schneider 1	1	315
Longfellow & Walters, Kinsey 1	12	266
Ohio Penn Oil & Gas Co., Work 22	*	437
Work 23	*	420
Burt 7	*	425
Morris & Co. 12	*	555
Medley 5	*	575
Medley 6	*	577
Cozzens 28	*	560

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ASHLAND COUNTY—		
Gold Crown Oil & Gas Co., Horn 4	25	650
Robinson & Co., Sellers 5	2	733
D'Lano & Co., Devault 4	*	720
Ohio Fuel Gas Co., Welch 2	¶1¼	....
Stillman 1	¶¼	....
Moore 1	¶¼	....
ATHENS COUNTY—		
Orange Gas Co., Swartz 1	*	1186
Ohio Fuel Gas Co., Koehler 1	¶2¼	1198
McClanahan 1	¶¼	1431
Webb 1	¶¼	1650
MUSKINGUM COUNTY—		
Ohio Fuel Gas Co., Derry 1	¶¼	4218
Mahaney 1	¶¼	3723
Hopewell Gas & Fuel Co., Michael 4	25	3224
MEDINA COUNTY—		
Curtis & Co., Brown Jr. 3	30	420
Myers Bros., Mong 3	*	2830
FAIRFIELD COUNTY—		
Sturm & Co., Shaw 3	¶¼	785
Peter Bishop & Co., McAfee 1	¶¼	767
PERRY COUNTY—		
Gas Producing Co. of Ohio, Flautt 1	¶¼	3126
Gordon 1	¶¼	3015
HOCKING COUNTY—		
Ohio Fuel Gas Co., Burns 1	¶1¼	2539
Rock Oil & Gas Co., Sheets 2	*	2578
LORAIN COUNTY—		
Wiser Oil Co., Standen 1	*	....
Ohio Fuel Gas Co., Booth 1	¶1¼	....
WAYNE COUNTY—		
Ohio Fuel Gas Co., Bowman 1	*	....
Harmon & George, Hagerman 2	¶¼	790
COSHOCTON COUNTY—		
The Preston Oil Co., Clark 1	*	3255
KNOX COUNTY—		
Perkins & Co., Dowds 1	*	2660
GUERNSEY COUNTY—		
Hopewell Oil & Gas Co., Euge 3	*	3554

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
HARDIN COUNTY—		
Barnaby & Co., Kurt 3	¶½	1356
Kurt 4	¶½	1347
M. J. Lynch, Martin 2	¶¼	1413

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
CRAWFORD COUNTY—		
W. C. McBride, Inc., Magill 1	16	....
Watson & Co., Barrett 2	*	1043
MONROE COUNTY—		
Alspach & Co., Demint-Hardy 1	*	560
LAWRENCE COUNTY—		
John Phipps, Robins 8	6	1627
Clark No. 2, tr. 10	2	1002

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY, (Smackover)—		
Standard Oil Co. of La., Hardy-Murphy 30, 4-16-15, (sec comp)	*	2355

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Woodley Pet. Co., Harris 4, 14-17-12	¶5	1762
MOREHOUSE PARISH, (Monroe)—		
La. G&F Co., Sandidge 3, 15-20-4e.	¶26½	2146
OUACHITA PARISH (Monroe)—		
Pipes & Mack, Robertson & Reed 1, 10-18-4e	¶19¾	2179
RICHLAND PARISH—		
Hope Prod. Co., Thomason 1, 14-16-6e	¶25½	2402
La. G&F Co., Noble A-1, 35-16-5e.	¶40½	2450
Southern Carbon Co., Thomason C-1, 14-16-6e	¶26½	2450
Palmer Corp., Rhymes-England 13, 29-17-6e	¶29¼	2450
UNION PARISH, (Monroe)—		
E. S. Hall, Spencer 5, 14-20-3e	¶2¾	2158
WEBSTER PARISH, (Sarepta)—		
Magnolia Pet. Co., Denman 3, 1-22-11	42	2741

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BARATARIA—		
Humble Oil & Ref. Co., Delaware Fur Co. 1	*	7629
BLACK BAYOU—		
Freeport Sulphur Co., Yount-Lee 4	*	1308
EAST HACKBERRY—		
Calcasieu Oil Co., State Kelso Bayou 1	200	4084
Watkins 22	1312	2855

TEXAS

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
ALLEN DOME—		
Mills Bennett Production Co., Allen 2	*	5201
BARBERS HILL—		
Humphreys Corporation, Kirby B-8.	2200	5295
McAlbert Oil Co., Woodward 4	830	5316
Yount-Lee Oil Co., Chambers 16	1320	4733
BATSON—		
Paraffin Oil Co., Paraffine 87	4	380
HULL—		
Republic Prod. Co., Dolbear 71	*	3900
PETTUS—		
Rawlins et al, McCampbell 1	*	4525
RACCOON BEND—		
Humble-Valley, Remmert B-1	*	3856
Humble O&R Co., Woodley 10	900	....
REFUGIO—		
Royalty Oil Co., Hornberg 1	300	5447
Mission Dr. Co., O'Brien 1	677	6449
Moody-Seagraves Prod. Co., Rooke 1	*	6504
SARATOGA—		
Rio Bravo Oil Co., Cotton 102-A	65	550

SOUTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
DUVAL COUNTY—		
Frazier et al, Duval Co. Land Co. 1.	1650	2308
WHITE POINT—		
Saxet Oil Co., Rachel 17	¶34½	4893
ZAPATA COUNTY—		
Pal-Mar Oil Co., Bustamente 1	*	1323
South Texas Prod. Co., Guittierez 1	¶30	1733
O. W. Killam, Cuellar 32-B	75	1565
JIM WELLS COUNTY—		
Larcro Oil Co., Wade 1	¶40	2917

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
CARSON COUNTY—		
Empire Gas & Fuel Co., M. Sims 1	*	3590
Plains Holding Co., J. C. McConnell 1	¶42	2650
GRAY COUNTY—		
Empire Gas & Fuel Co., Frashier 1.	¶33½	2610
HUTCHINSON COUNTY—		
Huber Pet. Co., Johnson-Pure 1	¶4½	3109
Sinclair O&G Co., Johnson 1-C	25	3143
MOORE COUNTY—		
Texas Interstate P. L. Co., Sneed (Sec. 6) 1	¶8	2550
WHEELER COUNTY—		
McGee et al, Jolly 1	*	2305
Northern Texas Utilities Co., Williams-Laycock 3	¶1½	2025

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
C. S. Cole et al, Barry 1	*	774
H. H. Fraser et al, Long-Harry 1	*	1351
F. P. Hynes et al, Richardson 1-B.	*	1200
Jess Lincoln et al, Kovar 1	*	1443
W. C. Young et al, Langford 1	*	1429
BAYLOR COUNTY—		
Consolidated Oil Co. et al, Portwood 20	*	1414
COOKE COUNTY—		
Deep Rock Oil Corp.-Faith Oil Corp., Purcell 1	*	1580
D. L. Edmiston et al, Henscheid 1	*	1841
W. B. Hamilton et al, Jacobs 2	8	1610
Shipley 1	*	1678
WICHITA COUNTY—		
F. W. Boardman et al, Powell 1	*	1531
Bridwell Oil Co., Waggoner 1	*	900
YOUNG COUNTY—		
Belknap Coal Co., Fee 2	115	699
Glover & Wall, Johnson 7	*	702
J. F. Hart et al, Watson 1	¶4	585
Martin & Maer, Smedley 1	*	925
J. J. Moran et al, Howard 1	45	919
Petroleum Producers Co., Graham 4	25	695
Smith & Shamblin, Bullock 1	*	700
The Texas Co. & Jas. McKanna, Finch 2-A	215	660
Finch 3-B	350	731

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Rector Oil Co., Baker 1	*	1596
CALLAHAN COUNTY—		
Hornbeck & Terry, Terry 1	¶¼	564
COLEMAN COUNTY—		
Crabb & McNeill, Henderson 1	*	395
Gault-Brown Co. et al, Stewardson 3	¶3¼	1602
Gibson-Payne & Clark, Rogers 2	¶1-10	2092
Meredith & Horrman, Morris 1	¶1¼	1705
EASTLAND COUNTY—		
Lone Star Gas Co., Smith 1	¶¼	3875
Mook-Texas Oil Co., Sibley 12	¶1¼	875
ERATH COUNTY—		
McCarter et al, Cage 1	¶¼	3423
STEPHENS COUNTY—		
Chastain-Donley & Vacuum Oil Co., Coody 1	*	3335

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
PECOS COUNTY—		
Cardinal Oil Co., Tippett-Shell 1-G	*	452
WINKLER COUNTY—		
Magnolia Pet. Co., Scarborough 3	100	2876

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
LIMESTONE COUNTY—		
Geo. B. McCamey et al, Kosse Townsite 1	*	660
VAN ZANDT COUNTY—		
Humble O&R Co., Sanger Bros. 2	4500	2943
Jenkins Bros. et al, M. E. Davis 1	10	3031
Pure Oil Co., A. D. Clark (2-ac) 1	6000	2956
O. L. Swain (80-ac) 2	5000	2922
W. F. Swain (40-ac) 3	3500	2922
Fletcher B. Smith 2	8000	2932

NEW MEXICO

Company, Well and Location	Initial Production Bbls.	Depth
LEA COUNTY—		
Empire Gas & Fuel Co., Hardin 3	¶10-8680	4220
Ohio Oil Co., State 4	¶3-3695	4215

PERMITS GRANTED FOR NEW WELLS

ARKANSAS

OUACHITA COUNTY—M. S. & M. Oil Co., Arnold and Doyle 2, center nw¼ se¼ se¼ 23-15-16.

CALIFORNIA

BELRIDGE—Standard Oil Co.'s McPhail 1, 36-27-20. Shell Oil Co.'s Core Hole D, 14-28-20. Union Oil Co.'s Belridge 17, 36-27-20.

INGLEWOOD—E. K. Allison Syn.'s Baldwin Hills 1, 8-2-14.

KERN COUNTY—Superior Oil Co.'s KCL-1, 32-29-25.

LONG BEACH—H. L. Whiston, Fee 1, 19-4-12.

LONG BEACH — Tom J. Cannon's Hall-Webber 4, 29-4-12. Enid Oil Co. 1, 13-4-13. El Bar Oil Co. 2, 19-4-12. Malibu Signal Oil Co. 1, 19-4-12. J. Orville Seeple's Sterling 1, 19-4-12.

LOS ANGELES COUNTY — Lamona Oil Assn. 2, 34-1-9. Taylor Oil Co. 1, 12-2-15. Wilmington Cons. Oil Co., Ltd, 1, 17-4-13.

PLAYA DEL REY—Protective Oil Co. 1, 21-2-15. Van Wig Oil Co. 1, 28-2-15. Venice Cons. Oil Co. 3, 28-2-15. Barnsdall Oil Co.'s Burks 2, 28-2-15; Burks 8, 28-2-15. The Ohio Oil Co.'s Block 1-2, 28-2-15. Pacific Properties' Stone-Hunter 2, 28-2-15. Black Gold Oil Co.'s Francis J. Heney 2, 21-2-15. Don S. Shadle's Shadle 1, 28-2-15.

PLAYA DEL REY — Thos. Kelly & Sons' Gage 2, 28-2-15. Knox-Powell-Stockton's W. G. Davis 4, 21-2-15. Marcel Oil & Gas Co.'s Black 4, 21-2-15. Pacific Shore Oil Co. 3, 28-2-15. Birch Royer Oil Co. 1, 28-2-15. Blue Ridge Oil Co.'s Stanley 3, 28-2-15. Beverly Hills Pet. Corp. 3, 28-2-15. Blue Ridge Oil Corp.'s Hertel 14, 28-2-15. Brooks-Rankin Oil Co. 1, 28-2-15. H. L. J. Oil Co. 2, 28-2-15.

NEWHALL—York-Smullin Oil Co. 5, 13-3-16.

TORRANCE—California Ventura Oil Co. 3, 6-4-14.

ELWOOD — Barnsdall Oil Co.'s Bishop-Evans 1, 14-4-29.

FRESNO COUNTY—Standard Oil Co. 34, 29-21-17.

KINGS COUNTY—Thomas H. T. Purman 1, 36-23-17.

SANTA BARBARA COUNTY — Petroleum Finance Corp. 202-1, 34-4-25.

SESPE—Merchants Pet. Co. 5, 1-4-20.

SUNSET—Lake View Oil & Refining Co. 44, 4-11-23.

VENTURA—Shell Oil Co.'s Taylor 67, 29-3-23.

KANSAS

COWLEY COUNTY — Home Natural Gas Company, Baird 1, nw c ne, 32-34-3e.

McPHERSON COUNTY — Otstot et al, Munn 2, sw c, 6-20-1w. Miller, Shell Pet. et al, Blair 1, nw c, 32-19-1w. Carey and Shell Pet., Smith 1, c ne sw, 15-19-2w. Broswood Oil Co., Giffin 1, c nw sw 14-19-2w. Labengayer and Gurley, Rolander 1, sw se sw 30-18-2w.

SEDGWICK COUNTY — Blankenship Pet. Co., Shaffer 2, (owdd) se ne nw 30-27-2e. Eisenhour et al, Horde 1, sw c se se nw 19-27-2e. Blackwell O&G, Rounds 1, ne c 17-27-2e.

WOODSON COUNTY—Empire O&R et al, Berry 2, sw c 26-23-13e.

LOUISIANA

BOSSIER PARISH— W oodley Pet. Co., Shreveport, Sheppard 1, 14-17n-12w, 330 ft n and 660 ft w of s¼ cor of sec.

CADDO PARISH—Junior Oil & Gas Co., Shreveport, Breard 1, 9-18n-16w, 1980 ft w and 1320 ft n of se cor of sec.

CALCASIEU PARISH — Gulf Ref. Co., Houston, G. W. Gardiner Est. et al Fee 5, 33-10s-12w, 303 ft e and 150 ft n of sw cor se¼ o ne¼.

IBERVILLE PARISH — Gulf Ref. Co. of La., Plaquemine, Wilberts Myrtle Grove Pltg. Co. 7, 53-9s-11e, 2920 ft s and 1284 ft w of ne cor of sec.; Wilberts Myrtle Grove Pltg. Co. 6, 53-9s-11e, 840 ft s and 65 ft w of ne cor of sec.

For Tabulation and Comparison See Market Section

SABINE PARISH—Essoo Pet. Co., Kansas City, La. Long Leaf Lbr. Co. 1, 35-8n-11w, 487 ft n and 40 ft w of se cor sw¼ of sw¼. A. J. Diffie & Newton Barett, Tulsa, T. J. Lites 1, 34-8n-11w, 330 ft n and 330 ft w of center of sec. Lyons & Nealy, Shreveport, Cooper 1, 32-8n-12w, 300 ft n and 330 ft w of se cor sw¼ of nw¼. Pelican Nat. Gas Co., Shreveport, La. Long Leaf Lbr. Co. 7, 10-8n-11w, 300 ft w of ne cor nw¼ of sw¼. C. W. Robinson, Shreveport, J. H. Trammell 1, 5-7n-11w, center of frac s½ of ne¼ of ne¼. A. H. Tarver, Shreveport, Baker 1, 36-8n-12w, 330 ft s and 330 ft e of nw cor of ne¼. The Texas Co., Shreveport, Stoker 1, 10-7n-11w, 300 ft s and 300 ft e of center of sec. Towery Drlg. Corp., Shreveport, Sabine Lbr. Co. 1, 2-7n-12w, 300 ft s and 300 ft e of nw cor of sec.

TERREBONNE PARISH—The Texas Co., Shreveport, State-Caillou Island 6, 19-23s-20e, 3120 ft w and 2939 ft s of ne cor of sec.

VERMILLION PARISH — The Pure Oil Co., Ft. Worth, Southwest La. Ld. Co. 1, 4-12s-1w, 300 ft s and 300 ft w of ne cor of sec.

WEBSTER PARISH — Cassidy & Davis, Smackover, Ark., E. E. Nickerson 1, 29-23n-10w, 300 ft s and 300 ft w of ne cor of sw¼.

OKLAHOMA

CARTER COUNTY—Chickashaw Gas Corporation, Carter 1, se nw nw 13-1s-3w. Carter Oil Co., Hopson 1, ne c 25-1s-3w. Max Westheimer, Cox 1, ne c nw 25-1s-3w. Magnolia Pet, Pool 1, se c ne ne se 29-1s-2w.

CREEK COUNTY — O. M. Irelan et al, Smith 3, csl sw se se 11-17-10e. J. B. Greives, Lowe 8, swc se ne ne 13-19-8e.

HUGHES COUNTY—Jarvis and Holm et al, Street 1, sw nw nw 16-7-8e. Empire O&R et al, Scroggins 1, sw se se 20-7-8e.

KIOWA COUNTY—Christian et al, James 1, ne c se 8-7-18w.

MUSKOGEE COUNTY—R. Kenworthy et al, Dodson 1, ne sw se 6-14-19e. J. M. Foltz, Woodall 1 (owdd) se c sw nw 20-15-16e.

OKLAHOMA COUNTY—Scott and Co., 1, sw c nw ne sw 35-12-3w. Marco O. & Royalty Co., Refinery 1, nw c se ne se 4-11-3w. Mabee Prod. Co. & Tidal, Reynolds 1, nw c se ne nw 10-11-3w. Anderson-Prichard Oil and Phillips Pet., Sandnes 1, sec ne se nw 10-11-3w.

OKMULGEE COUNTY — C. Ramstead, Hoffman 1, ne c 29-12-14e. E. J. Lambert, Atkins 1, sw c nw se 17-13-15e. Whitcomb, Harris 3, sw c ne ne 1-14-14e. Mack Drilling Co., Peters 1, se c sw, 34-16-14e.

PAWNEE COUNTY — Dewey Neal et al, Diem 2, sw ne nw 18-21-8e.

SEMINOLE COUNTY — Gypsy Oil Co., Charty 1, ne se sw 29-6-6e. Jarvis and Holm, Fish 1, ne nw ne 30-7-8e. Ligon, Todd et al, Wilson 1, cwl nw nw ne 30-8-8e.

STEPHENS COUNTY—Pace et al, Toney 1, sw c se nw 27-2s-7w.

WAGONER COUNTY — F. D. Helscel, Apueka 1, se c sw nw 6-17-15e. A. H. Secrist, Barnett 3, ne c nw se nw 34-17-16e. Western Development & Elec. Co., Barnett 7, nw c se ne 34-18-17e.

TEXAS

ARCHER COUNTY — C. E. Litchfield, Wichita Falls, J. T. Richardson, 40, 1, S 1, B 55, Meade sur, 500 ft from e and 150 ft from s line. Schulz & Weaver, Wichita Falls, C. F. Green, 160, 4, J. Levins sur, 1950 ft from w and 150 ft from s line. H. P. Key, Olney, M. P. Andrews, 40, 1, 1805, TE&L sur, 450 ft from n and 150 ft from e line. A. T. Wolfe, Wichita Falls, W. M. White, 56, 1, T. Freeman sur, 150 ft from n and w lines.

AUSTIN COUNTY—T. H. Pratt, Brenham, Pomykal, 12, 3, 80 ft from nw and 40 ft from ne line.

BEXAR COUNTY — Kayne & Uhl, H. Rohde, 57, 1, 133 C. Texada sur, 1404 ft from w and 150 ft from s line.

BROWN COUNTY—R. C. McCarter, Rising Star, G. Harris, 80, 1, J. M. Harris sur, 200 ft from s and e lines. W. D. Gully et al, Brownwood, A. F. Armstrong, 142, 1, S 1, H&GN sur, 1700 ft from s and 3237 ft from w line survey.

CARSON COUNTY — Continental Oil Co., Wichita Falls, S. B. Burnett, 160, 1, S 100, B 4, I&GN sur, 330 ft from n and e lines of ne¼. Cities Service Gas Co., Pampa, Burnett, 29a, S 83, B 5, I&GN sur, center of se¼. North American O&G Co., Amarillo, Poljing, 160, 1, S 24, B Y2, TT Ry. sur, center of ne¼. Hogy, Harrington & Marsh et al, Amarillo, R. S. McConnell, 80, 3, S 46, B 4, I&GN sur, 660 ft from n and 1320 ft from w line sec; 4, 330 ft from e and 1980 ft from n line sec.

CALLAHAN COUNTY—Star Drilling Co., Wichita Falls, E. L. Finley, 40, E 1, S 77, Bayland Asy. sur, 150 ft from n and 250 ft from e line.

COOKE COUNTY—Big Indian O&G Co., Gainesville, B. W. Davis, 87, 2, B 9, F.C.S.L. sur, 450 ft from n and 1350 ft from e line. Harvey & Ellzey, Pilot Point, C. Jacobs, 40, 2, Wm. Colwell sur, 150 ft from n and e lines. Danciger O&R Co., Fort Worth, J. F. Truebenbach, 150, 3, J. Clark sur, 150 ft from w and 450 ft from s line.

COLEMAN COUNTY — Crabb & McNeel, Cross Plains, E. Henderson, 46, 1, 161, A. White sur, 750 ft from n and 1100 ft from w line. Rector Oil Co. & Midwest Expl. Co., Amarillo, E. W. Gill, 400, 1, 69 E. Mudd sur, 850 ft from e and 1700 ft from s line. Canyon Oil & Gas Co., Cross Plains, O. Kellar, 25, 1, I. Harris sur, 450 ft from e and 150 ft from s line. W. H. Gant et al, Ardmore, Okla., J. B. Love, 60, 1, 784 S. Sprague sur, 150 ft from s and 450 ft from e line.

CHAMBERS COUNTY — Mills Bennett Prod. Co., Houston, Fisher, 23, 3, Wm. Bloodgood sur, 150 ft n of 2.

CLAY COUNTY—L. L. Bain, Iowa Park, R. M. Waggoner, 21, 2, K. McKenzie sur, 150 ft from n and 350 ft from e line.

DUVAL COUNTY—Texas Co., Houston, T. T. Co., 160, 1, GC&SF sur, 150 ft from n and w lines of sec 297.

FALLS COUNTY—A. T. Eddingston, Port Arthur, R. Llewelyn, 150, 1, Allen & Manchaca sur, 175 ft from n and 1500 ft from w line.

FOARD COUNTY—Texas Co., Fort Worth, L. K. Johnson, 1, S 36, B L, S. P. Ry. sur, 3550 ft from n and 197 ft from e line of sec.

GRAY COUNTY—Warner Oil Co., Pampa, J. S. Morse, 80, 1, S 68, B 25, H&GN sur, 330 ft from s and w lines of n½ nw¼. Texapampa O&G Co., Pampa, J. H. Ayres, 308, 1, S 76, B 3, I&GN sur, 330 ft from s and e lines of sec. Kewanee O&G Co., Tulsa, Morse C, 160, 1, S16, B A9, H&GN sur, 330 ft from s and e line se¼. Morse A, 160, 4, S 2, B 26, H&GN sur, 330 ft from s and w lines of nw¼. Gulf Prod. Co., Fort Worth, S. Faulkner, A, 320, 3, S 33, B B2, H&GN sur, 330 ft from n and 2310 ft from w line s½. Magnolia Pet. Co., Dallas. M. E. Morse, 40, 1, S 68, B 25, H&GN sur, 330 ft from n and w line sw¼ of nw¼. Graham, Cree & Hoover, Amarillo, G. H. Cole, 160, 1, S 105, B 3, I&GN sur, 330 ft from n and w lines. Danciger O&R Co., Fort Worth, G. Thut, 113, 1, S 3B, H&GN sur, ne corner.

GUADALUPE COUNTY — Gulf Prod. Co., Fort Worth, Posey, 71, 10, J. R. Robinson sur, 897 ft from ne and 450 ft from nw line. Dix-McKean, 81, 12, J. R. Robinson sur, 450 ft from NE&NW lines. Magnolia Pet. Corp., Dallas, R. Miller, 92, 7, J. B. Alexander sur, 150 ft from nw and ne lines.

(Continued on page 96)

WILDCATS FROM ALL SECTIONS

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ANDREWS COUNTY—		
Fuhrman Pet. Corp., W. T. Ford 1	235	4613
TAYLOR COUNTY—		
Adams-Ferguson-Hobbs' Lowe 2....	¶½	2560

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, set 15½ cas 675 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, sd 2510 ft.

COCHRAN COUNTY—Continental Oil Co.'s Slaughter 2, lcn.

CONCHO COUNTY—Beesley et al's Waring 1, sp and sd. A. W. Turner-Cromwell & Wesner's Brosig 1, co 1520 ft.

CRANE COUNTY—Cranfill Bros. Oil Co. et al's J. T. Muir 1, elev 2499 ft, top salt 485 ft, top white lime 2330 ft, set 6⅝ cas 3773 ft. Cranfill & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505 to 1400 ft, top brown lime 1415 ft, top white lime 2455 ft, making gas with spray oil, dr 18 ft by top tools, td 4488 ft.

CROCKETT COUNTY—John W. Dieringer et al's G. Barnscrew 1, dr 505 ft. Magnolia Pet. Co.'s A. C. Hoover 2, sd 2056 ft. Taylor-Link Oil Co.'s Mary Bullock 1, dr 1460 ft.

CULBERSON COUNTY—Cranfill Bros. & Carl Shoults' Mrs. J. P. Seay 1, lcn. Grisham-Hunter Corp. et al's W. D. Garren 2, sd 1520 ft. W. L. Kornrumpf et al's Garren 1, dr 1155 ft.

DAWSON COUNTY—R. A. Albaugh et al's John Robinson 1, rig.

ECTOR COUNTY—Southern Crude Oil Pur. Co.'s Cowden 2, dr 300 ft. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, top salt 865 ft, drilled by tools at 3252 ft and cem hole.

EDWARDS COUNTY—Dalgish et al's Peterson 1, elev 2345 ft, dr 4955 ft. Phillips Pet. Co.'s Holman 2, cem cas 6640 ft.

FISHER COUNTY — Condor Pet. Co. & Humble O&R Co.'s Wilson 1, elev 1879 ft, dr 1690 ft. Cranfill-Reynolds Co.'s Flannigan 2, sd 3130 ft; Willingham 3, sd 3090 ft. The Texas Co.'s Stephens 2-A, elev 1936 ft, dr 2774 ft; M. Teagarden 2-B, elev 1870 ft, dr 2740 ft.

GAINES COUNTY—Texas Consolidated Oil Co.-T. P. Coal & Oil Co.'s E. H. Jones 1, rig.

GLASSCOCK COUNTY—F-H-E Oil Co.'s J. W. Meek 1, top salt 1120 ft, dr 2400 ft.

TOM GREEN COUNTY—Belding & Dutton's Norsworthy 1, sd 765 ft. Mintex Oil Co.'s Campbell 1, sd 1835 ft. Phillips Pet. Co. et al's Jennings-Gulden 1, elev 2016 ft, sd 5010 ft. Pratt & Hancock's Lewis 2, sp and sd.

HOWARD COUNTY—Greene Prod. Co. & Getty Pet. Corp.'s Denman 1, elev 2280 ft, top lime 1700 ft, pumped 120 bbls oil after second shot, td 2826 ft; Snyder 1, elev 2314 ft, top lime 1790 ft, dr 2920 ft. McGinley-Sigler Co.'s Hyman 1-B, elev 2349 ft, top lime 1918 ft, trace oil 2219 ft, dr 2225 ft.

HUDSPETH COUNTY—G. R. Theison et al's University 1, sp and sd.

IRION COUNTY—Central Oil Co.'s (W. E. Newton) H. Horney 2, dr 1155 ft. Cromwell et al's Tankersley 1, elev 2520 ft, sd 1712 ft. Dixie Oil Co.'s W. H. Williams 1, rig. Straughn & Texannati Oil Co.'s Tankersley 1, elev 2306 ft, sd 1440 ft. F. E. Webb & Brazelton's Williams 1, elev 2363 ft, sp and sd. P. H. Williams et al's Noelke 1, dr 3160 ft.

JONES COUNTY—McBest et al's Roberts 1, sd 1000 ft. Union Oil Co. et al's Hedrick 1, dr 650 ft. Sam Yingling et al's L. R. Cade 1, dr 915 ft.

LOVING COUNTY—The California Co.'s Reagan-McIlvain 5, top salt 770 ft, dr 3680 ft; Reagan 6, top salt 740 ft, dr 2260 ft; Reagan 7, rig. Carl Cromwell & Atlantic Oil Prod. Co.'s Geo. B. Russell 1, rig. Douglas et al's Wheat 1, lcn. A. R. Eppenauer Drlg. Co. et al's Allen 1-A, salt 850 to 4094 ft, cem cas 4111 ft. Henshaw et al's Reagan 2, rig. Lewis & Slagel Drlg. Co.'s Cartwright 1, sp and sd. C. H. Lockhart et al's F. W. Hubbard 1, lcn. Lockhart & Co.'s Allen 4, sp; Hubbard 7, lcn. Miller-Burge & Healy's Chapman 1, top salt 750 ft, sd for water 4250 ft. H. W. Martin et al's Wheat 1, lcn. Phillips Pet. Co.'s Wheat 2, top salt 775 ft, cem cas 4099 ft. Rush-Anderson & Moor's Wheat 1, dk.

MENARD COUNTY—J. C. Barnett et al's Callan 3, elev 2077 ft, ur acct hfw in sand 1848-80 ft, td 1883 ft. L. G. Priest et al's Sorrells 1, elev 2279 ft, set 5 3/16 cas 2520 ft.

MIDLAND COUNTY—Kirwin et al's J. M. Mathena 1, top anhydrite 1550 ft, salt 1610 to 2295 ft, dr 3360 ft.

MITCHELL COUNTY — Lewis & Slagel Drlg. Co.'s A. M. Bell 1, elev 2278 ft, top lime 1700 ft, trace oil 1945-65 ft, dr 2180 ft.

PECOS COUNTY—J. R. Bell et al's H. J. Eaton 1, rig. Bell & Humble O&R Co.'s Scharff-Blackman 1, elev 2426 ft, top salt 940 ft, show oil, cem cas 1543 ft, td 1564 ft. Charlesworth-Messenger Oil Co.'s Butz 1, elev 2519 ft, dr 1145 ft. E. L. Chapman et al's Streety 1, elev 2653 ft, sd 2210 ft. Cosby Prod. & Roy. Corp.'s Cordova 1, elev 2320 ft, top salt 725 ft, top lime 1826 ft, sd hfw 3015 ft. C. L. Dittman Drlg. Co. et al's Eaton 2, lcn; Eaton (Sec. 37) 1, sp and sd; Jackson 1, machine. Humble O&R Co.'s H. L. Kokernot 1, elev 3593 ft, top salt 2713 ft, top black lime 3981 ft, fsh tools 6170 ft; Mrs. C. L. Thompson 1-B, elev 3061 ft, sulphur water 3435-40 ft, sd 3575 ft. B. C. Mann et al's Scharff-Blackman 1, rig. McCarty Oil Co.'s Gray 3, dr 1375 ft. J. R. Miller et al's Bennett 1, sd 1700 ft. J. D. O'Mara et al's Bennett 1, elev 2508 ft, sd 1230 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, fsh 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, top Delaware 4265 ft, top sand 4282 ft, temp abn 5000 ft. Rio Grande Oil Co.'s Webb 1, dr 2510 ft. Riser & White's Riser 1, sd 405 ft. Schelling & Slaughter's Yates 1, sd 340 ft. Sides & Cloyd's Blackstone-Slaughter 1, dr 3020 ft. Southern Crude Oil Pur. Co.'s Scharff-Blackman 1, dr 585 ft. Williams & Moran's Heiner-State 1, elev 2528 ft, dr 1050 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 179, dr by tools, td 4003 ft; University 5-C, dr out cement plug, td 8051 ft. Group One Oil Corp.'s University 4-B, dr shale 7051 ft. T. B. Slick et al's A. August 1, elev 2609 ft, top salt 1095 ft, dr 2220 ft.

REEVES COUNTY—The California Co.'s Kloh 1, elev 2798 ft, top black lime 4207 ft, top Delaware 4236 ft, cased off water and show oil with 5½ cas at 4250 ft, coring 4282 ft; Kloh 2, lcn.

RUNNELS COUNTY—Boyce & Lamar's Lange 1, elev 1844 ft, sd 2643 ft. Chas. Dutton et al's G. W. Dean 1, co 1695 ft.

SCHLEICHER COUNTY—Delmar Oil Co.'s O'Harrow 1, elev 2421 ft, dr 5670 ft. Eastland Oil Co. Unit Plan's Tisdale 1, lcn. Munger-Wilson Oil Co.'s Page 1, elev 2270 ft, sd 5053 ft. Paul Teas & Walter Gant's Allison 1, elev 2311 ft, sd 3960 ft. J. D. Wesner et al's R. E. Ratliff 1, sd 750 ft.

SCURRY COUNTY — Camp Springs O&R Co.'s Strayhorn 1, sd 875 ft. Mid-Kansas O&G Co.'s Peckham 1, elev 2155 ft, dr 4425 ft. R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, ur to set 5 3/16 cas 5000 ft. Scurry County Oil Exchange's C. H. Earnest 1, lcn. Seifert & Dibble's Blackburn 1, top salt 720 ft, co 810 ft.

STERLING COUNTY—W. C. Beesley et al's W. L. Foster 1, elev 2518 ft, co 550 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 2, comp, as ½ mil ft gasser at 2299-2301 ft, td 2560 ft. Eastland Oil Co. et al's A. W. Hunter 2, show oil 2388-94 ft, tested water 2405 ft. Herring et al's Richie 1, elev 1978 ft, sd 2570 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, co to set 3-inch cas 6250 ft. Sanger et al's Abilene City fee 1, elev 1759 ft, dr 1660 ft. Sanger O&R Co.'s Osborn 1, rig.

TERRELL COUNTY—Big Bend Oil Corp. et al's Bassett 1, elev 2396 ft, sd 2670 ft. Mid-Kansas O&G Co.'s Goode 1, elev 2405 ft, sd 5226 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 6780 ft. Phantom Oil Co.'s Ingram 1, sd 3035 ft.

UPTON COUNTY—Gulf Prod. Co.'s J. H. Shirk 1, dr 340 ft. Penn Oil Co. & Shell Pet. Corp.'s J. M. Halamicek 1, lcn. TP Coal & Oil Co.'s King 1, dr 860 ft.

WARD COUNTY—Alpine Oil & Dev. Co.'s Boogher 2, top salt 795 ft, dr 920 ft. California Co. & Atlantic Oil Prod. Co.'s S. R. Allen 1, dr anhydrite-lime 2320 ft. Black & Massey's Allen 1, top salt 800 ft, dr 1155 ft. Empire Gas & Fuel Co.'s Sealy 1, set 12½ cas 387 ft. Grand Falls Oil Co.'s Blair-Boogher 1, dr 580 ft. Gulf Prod. Co.'s Hutchings 6, std rig; O'Brien 15, top salt 1145 ft, top brown lime 2290 ft, flowing 57 bbls oil, dr broken pay 2625-2785 ft. J. G. Kugle et al's Chas. Wallis 1, fighting heaving sand 225 ft. Magnolia Pet. Co.'s Atlantic-Sealy 1, lcn; John Sealy 1, top salt 2090 ft, top lime 2700 ft, flowing 40 bbls 29.2 gravity oil daily after second shot in lime 3036-65 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, sd 1200 ft. Rector Oil Co. et al's Boogher 1, spd and sd. Sid Richardson et al's O'Brien 5, top salt 1135 ft, top lime 2315 ft, tested 75 bbls oil and 7 mil ft gas at 2564-2769 ft. Rickford & Smith's Johnson 1, dr 650 ft. Shipley Oil Corp.'s Monroe 1-A, elev 2655 ft, top salt 2485 ft, dr 2655 ft. TP Coal & Oil Co.'s H. James 1, dr 465 ft.

WINKLER COUNTY—Magnolia Pet. Co.'s Bashara 1, dr 325 ft; J. B. Walton (Sec. 16) 1, lcn. L. C. Turman et al's Daugherty 1, top salt 1440 ft, top lime 2645 ft, sd making water 3186 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc,. used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr — straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CHEROKEE COUNTY—		
Arkansas Fuel Oil Co., N. A. Deaton 1	*	4705
DELTA COUNTY—		
The Delta Co., Mrs. Neatherly-Hays 1	*	3081

ANDERSON COUNTY — Frost Oil Co.'s Botting 1, A. B. Patton sur, set 12½ cas 250 ft. Humble O&R Co.'s J. W. McCaffrey 1, I&GN Ry. sur A-418, elev 365 ft, first broken Pecan chalk 2875 ft, hard chalk 2938-3163 ft, top Austin chalk 4049 ft, dr chalk 4260 ft.

BOWIE COUNTY—Lee Timberlake et al's Tidwell 2, L. M. Rice sur, lcn. Joe Burnham et al's G. W. Burnett 1, M. H. Janes sur, top Annona chalk 1430 ft, top chalk 2906 ft, sd 3150 ft. Maud Redwater Oil Co.'s Merritt 1, Y. S. McKinney sur, sd 635 ft.

CASS COUNTY—Wesley Morse et al's Henderson 1, C. C. Bailey sur, dk. Phillips Pet.

Co.'s J. R. Olds 1, J. A. Stephenson sur, elev 245 ft, top Saratoga chalk 1935 ft, top Annona chalk 1955 ft, dr shale 2655 ft. John C. Rogers et al's Lanier 1, K. A. Welborn sur, elev 366 ft, top Annona chalk 2144 ft, sd in shale 2270 ft. The Texas Co.'s Citizens Bank 1, Jos. Watkins sur, elev 339 ft, top Saratoga chalk 2260 ft, Annona chalk 2363 to 2855 ft, top Woodbine sand 3470 ft, dr lime and shale 3625 ft.

CHEROKEE COUNTY—Arkansas Fuel Oil Co.'s Deaton 1, abn with salt water in Woodbine sand at 4628-4705 ft. Arcadia Ref. Co. & Buder's Jones Gin Lot 1, dr 1000 ft. D. H. Byrd et al's W. H. Felder 1, Brooks Williams sur, fighting heavy flow water 603 ft.

DELTA COUNTY—The Delta Co.'s Neatherly-Hays 1, abn 3081 ft. D. S. Bond et al's J. J. Baker 1, T. P. Eddins sur, dr 730 ft. Worthington & Stedham's W. H. Dejernett 1, E. Chick sur, dr 600 ft.

ELLIS COUNTY—Foster & Richardson's Moise-Cerf 1, sd 2187 ft. E. M. Rogers et al's J. L. Winn 1, O. Wheeler sur, sd 1325 ft.

FANNIN COUNTY—Ed. V. Parsons et al's Morgan 1, J. E. English sur, elev 668 ft, showing gas, re-set 6-inch cas 3435 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, dr with trace oil 1615-50 ft.

GREGG COUNTY—W. A. Moncrief-J. E. Farrell & Arkansas Fuel Oil Co.'s F. K. Lathrop 1, Wm. Robinson sur, rig. W. T. Daniel & Mrs. Mamie Hammonds' Hamby 1, John Lout sur, elev 376 ft, top Saratoga chalk 2361 ft, sd in chalk 2590 ft.

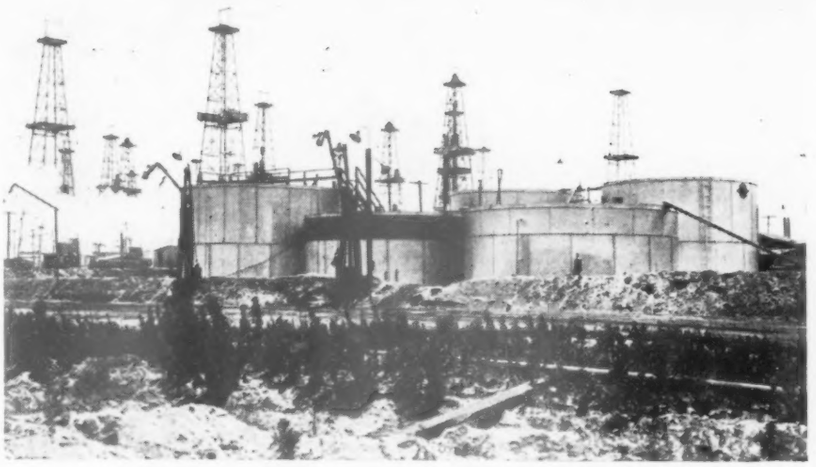
HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, Arron York sur, elev 397 ft, Pecan chalk 2810-3015 ft, sd 3460 ft. E. L. Chapman et al's Cade 3, J. B. Dorsey sur, rotary rig. Texas-State Oil Co. & R. H. Dearing et al's T. H. Skinner (20-ac) 1, J. Hinshaw sur, elev 453 ft, Pecan chalk 2500-2603 ft, Austin chalk 3559-3977 ft, dr in Woodbine sand 4151 ft.

LIMESTONE COUNTY — Imperator Oil Corp. et al's B. B. Barron 1, Evans Mabry sur, sp and sd. E. E. Obyrne et al's S. W. Haneock (37-ac) 1, H. York sur, lcn. Geo. B. McCamey et al's Kosse Townsite 1-A, skid machine. A. Yost-Bill Reiter et al's S. J. Fenner 1, H. C. Hoskins sur, lcn.

NAVARRO COUNTY—L. G. Priest et al's H. Albritton 1, H&TC Ry. sur, top Austin chalk 2276 ft, dr chalk 2530 ft.

RED RIVER COUNTY—D. M. Buffington et al's L. H. Moore (80-ac) 1, D. Cornelius sur, Annona chalk 3 to 241 ft, sd 575 ft. E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, sd 1505 ft. Droppleman & Bundy's J. W. Cunningham (180-ac) 1, S. V. Shi sur, sd in shale 1250 ft. Johnson Pet. Co.'s Style 1, Dean sur, sd 2215 ft. Lloyd Oil Corp.'s R. H. Mace 1, Wm. Cullum sur, Annona chalk 590-910 ft, dr 2310 ft.

RUSK COUNTY—J. Alford et al's Wallace-Thrash 1, R. H. Pinney sur, dk. Andy Anderson-Kimbrough-Miller's D. Bradford 1, elev 396 ft, top Pecan chalk 2500 ft, no production after three sand tests, td 3586 ft. Ed. W. Bateman et al's L. D. Crim 1, E. Sevier sur A-69, elev 440 ft, top chalk 2600 ft, dr 2645 ft. Dan Dillon et al's Frederick 1, I. Parker sur, dk. E. L. Chapman et al's A. P. Finney (20-ac) 1, I. Parker sur A-623 ft. Frank Files (O'Mara & Meredith's) Robertson (14-ac) 1, R. H. Pinney sur, dk. Frank Foster & Deep Rock Oil Co.'s C. D. Ashby (60-ac) 1, elev 429 ft, top Pecan chalk 2315 or 2601 ft, cem 6-inch cas 3580 ft after making flow oil via drill stem and sand tester at 3597-3614 ft. H. L. Hunt et al's Daisy Bradford (17-ac) 1, elev 391 ft, top Pecan chalk 2332 ft, first hard chalk 2500 ft, cem cas 3525 ft, ready test show oil 3542-86 ft, logged lime at 3645-50 ft. Tex. Lloyd et al's Camp (5-ac) 1, elev 408 ft, set 6-inch cas 3531 ft. J. K. Lewis & Abe Goodman's O. C. Jones (15-ac) 1, Wm. Brown sur, set 10-inch cas 100 ft. A. A. Malone et al's W. H. Camp (4-ac) 1, lcn. Patton & Harrell's Frederick 1, lcn. C. Rosenfield et al's E. L. Pinkston 1, M. V. Pena sur, elev 363 ft, sd 2015 ft. Nat Sadler et al's W. C. McElroy (45-ac) 1, Abner Nail sur, lcn. C. C. Stone et al's McCullough 1 and 2, lcns. Stroube & Stroube's W. H. Frederick (14-ac) 1, cem cas at 3514 ft to test show oil 3526-68 ft, td in Georgetown lime 2618 ft. Wainwright West



At Playa del Rey, California, these tanks are provided with loading racks to fill trucks

Oils, Ltd. et al's Geo. Moore (7½-ac) 1, materials.

SMITH COUNTY—Owen-Sloan Oil Co. et al's J. H. Starnes 1, J. W. Allen sur, elev 417 ft, Pecan chalk 2738-3052 ft, sidetracking drill stem 3770 ft. T. B. Slick & J. G. Kugle, Jr., et al's M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 2980-3275 ft, dr 3635 ft. Sun Oil Co.'s Oscar McGehee 1, Thomas Quevedo sur, elev 428 ft, dr 2720 ft. Thayer & Rogers' Dr. Willingham 1, Jacob Herrin sur, sd 2000 ft.

TITUS COUNTY—Deep Rock Oil Co.'s Ed. L. McElroy 1, Kendall Lewis sur, elev 460 ft, top broken chalk 2424 ft, dr 2700 ft.

UPSHUR COUNTY — McGinley Corp.'s Reeves-Truitt (47-ac) 1, L. B. Brown sur, rig.

VAN ZANDT COUNTY—Bethel Oil Co.'s P. Smith 1, M. Neal sur, elev 435 ft, sd 4603 ft. J. C. Fore & Geo. L. Pace's P. S. Hand 1, Wm. Sharman sur, Pecan chalk 2420-44 ft, dr 2460 ft. Hartt Pet. Co.'s M. L. Cox 1, A. C. Nugent sur, spd and sd. Neil McElroy et al's R. W. Murphy (159-ac) 1, H. Bailey sur, sp and sd. T. W. Moore et al (was Ward Powell's) W. A. Kellam 1, J. Russell sur, elev 515 ft, top Pecan chalk 2782 ft, top Austin chalk 4032 ft, dr 4260 ft. Van Oil Assn.'s J. C. Tankersley 1, L. Landers sur, dr 1035 ft.

VAN FIELD—Cranfill & Germany, Inc.'s, Swain (5-ac strip) 1, sp and sd. Hartt Pet. Co.'s Swain (2-ac strip) 1, sp and sd. Helms et al's C. E. Bogue 1, M. University sur, elev 461 ft, sd 2212 ft. Humble O&R Co.'s R. S. Blake 5, sp and sd; Blake 6, rig. Pure Oil Co.'s Sam Allen 1, top Austin chalk 2511 ft, sd for orders 2854 ft; A. D. Clark (42-ac) 2, top Austin chalk 2474 ft, cem cas 2836 ft; N. E. Clark (89-ac) 4, cem cas 2793 ft; N. E. Clark 5, rig; W. H. Cook (86-ac) 2, coring 2651 ft; V. T. Davis 1, dk; A. W. Ellison 2, dr 2957 ft; H. C. Gilbert 1, top Austin chalk 2253 ft, cem cas 2462½ ft, td 2475 ft; D. R. Howell (60-ac) 3, lcn; R. A. Howell (22-ac) 2, dr 2027 ft; Mary P. Neills 2, top Austin chalk 2450 ft, dr 2812 ft; Neills 3, lcn; M. F. Shirley (38-ac) 3, rig; O. L. & L. L. Swain (43.8-ac) 3, lcn; W. F. Swain (40-ac) 2, flowing small heads oil with heavy gas volume, td 2924 ft; J. T. Taylor 2, cem cas 2659 ft; A. R. Tunnell (101.2-ac) 5, dk; R. L. Wells 5, dk; Ella York 2, lcn. Shell Pet. Corp.'s E. L. Fowler (32.65ac) 8, dr 1210 ft. Sun Oil Co.'s Thompson 3, dk. The Texas Co.'s R. A. Tunnell (100-ac) 4, dr chalk 2420 ft. Stumpff et al's L. K. Riggs (3-ac strip) 1, dk. Ventex Oil Co.'s L. A. Smith (2-ac strip) 1, dk.

WOOD COUNTY—Wood County Dev. Co.'s Ricks 1, Daniel Fuller sur, sd 1000 ft.

SOUTH TEXAS

BROOKS COUNTY—Ed East's B. Garcia 3, Las Mastena Y. Gonzalene Grant, location changed, rigging up.

DUVAL COUNTY — Magnolia Pet. Co.'s O'Hern & Seacord, Benavides 4, blk 28, sur, 174, dr 1965 ft. Wilkins Seacord's Mulholland 2, Benavides, sur 173, dr deeper from 2837 ft, dr 2890 ft. F. M. Frasher & R. F. Schoolfield's Bishop Duval Land Co, sur 135, sd 1590-1600 ft tested sw 6⅝-in csg, 2293 ft, sd 2303-2308 ft, flowed 500 bbls in 7 hours. Magnolia's Pet. Co.'s Edge-Hahl 1, sur 63, dr 4090 ft. S. R. & C. Oil Co.'s (Vacuum) Duval County Ranch Co. 1, sur 280, rigging up. The Texas Co.'s Duval County Ranch Co. 1, sur 297, rig up. Humble's Kohler 50, sur 164, 10-in csg 36 ft, dr 1731 ft.

JIM HOGG COUNTY—J. W. Pippin's N. Hinnant 1, blk 11, sur 147, dk. Cole Pet. Co.'s W. P. Allen 1, blk 7, sur 23, sd 2275 ft. P. H. Wilson's Edds 1, sur 209, rigged up, location changed, correcting title. J. D. Pulliam, Jr.'s Jones 1, Diego Hinojosa Grant, dr 2300 ft. E. E. Watts, Agent's Gomez 1, sur 125, sd 1568 ft tested dry, td 2000 ft plugged back to 1103 ft, 6⅝-in csg 1070 ft woc.

LA SALLE COUNTY—Fred W. Volz, Coleman 1, sur 514, 10-in csg, 40 ft woc.

STARR COUNTY—The Texas Co.'s V. G. Guerra 5-A, 6⅝-in csg 3441 ft tested gas, oil & sw, dr 3725 ft. Los Olmas Oil Co.'s Kelsey-Bass 2, blk 6, Subdivision of Porcion 75-76-77, dr 75 ft.

WEBB COUNTY—O. W. Killam's Garcia 2, blk 43, Los Ojuelos Grant, 6⅝-in csg 1846 ft, sd 1846-1850 ft woc. George S. Marshall's C. W. Webster 3, sur 684, sd 2123-2160 ft tested 15,000,000 cu ft gas, dr 2618 ft. Usher Carson et al's Benavides 3, blk 7, sur 1613, spudded 11-26-30. O. W. Killam's Bruni 1, sur 77, 10-in csg, 40 ft, dr 300 ft.

ZAPATA COUNTY—C. R. Moore & J. W. Moore's Adela G. de Flores 1, blk 99, E. M. Doty Subdivision, sd 1570-1573 ft, tested dry, stdg 2000 ft. Adela G. de Flores 2, blk 151, E. M. Doty Subdivision, stdg 50 ft. O. W. Killam's Lopez 1, sur 251, dr 2222 ft. Nordan & Morris' Grim & Yakey, S. Bustamante 1, Share 34, Fansler Partition, Comitas Grant, dk. Allied O&G Co.'s D. Bustamante 1, Comitas Grant, spudded 11-22-30, dr 500 ft. Allied Oil & Gas Co.'s Allen & Morris, E. Gutierrez 12, stdg 100 ft. E. Gutierrez 13, Comitas Grant, td 1311 ft swabbing 25 bbls an hour. J. K. Gibble's I. G. Trevino 1, blk 3, sur 65, dk. Pal-Mar Oil Co.'s Jose Bustamante et al 1, Comitas Grant, tested sw and oil, td 1323 ft abnd 11-24-30. Shankle-Newton O&G Co.'s W. R. Shankle, Gutierrez 6, Comitas Grant, spudded 11-20-30, dr 1000 ft. Gutierrez 7, Comitas Grant, location. S. R. & C. Oil Co.'s F. Cuellar 1, blk 16, sur 62, location. F. Cuellar 1, blk 16, sur 285, dk. F. Cuellar 2, blk 8, sur 19, location. Montemayor 3"D" , blk 8, sur 64, rigging up. Whicker, Arnold & Ahler's M. Garza 3, blk 1, Subdivision Zorro Ranch, Comitas Grant, dk. J. H. Winch's Alejandro Bustamante 2, Comitas Grant, dr 1000 ft. South Texas Prod. Co.'s F. Gutierrez 1, sur 162, td 1733 ft 30,000,000 cu ft gas 630 lbs. rock pressure. O. W. Killam's Cuellar 32"B", sur 277,

td 1565 ft, 75 bbls 11-25-30. Cuellar 34 "B", sur 277, location. Cuellar 35"C", sur 278, loc. John Pappas Pool, Inc.'s Flores 1, Rio Grande River, Porcion 35, rigging up. F. M. Blair & Son's E. Gutierrez 1, blk 2, Murt Cullinan Subdivision, sd 1389-1392 ft, stdg 1750 ft. O. W. Killam, Slator 2, Borrego Grant, rigging up. Lincoln O&G Co.'s Gutierrez 1, blk 24, Subdivision La Huerta Grant, stdg 1150 ft. G. Mackenzie & F. A. Talmadge's G. F. Trevino 1, sur 4, sd 235-260 ft shows gas. Wm. Mark's Flores 1, blk 36, spudded 11-26-30. National Oil Co. of Texas' Luther et al 1, blk 97, Da Pron Subdivision, rigging up. B. F. Nixon's A. Gutierrez 1, Borrego Grant, preparing to resume dr. John J. O'Hern's S. Benavides 1, Villa Grant, sd 1540-1550 ft tested dry. Penny Production Co.'s Juan V. Cuellar Jr. et al, sur 2, Pappas Subdivision, sd 1748-1758 ft tested gas and sw, dr 1780 ft. T. H. Ward's Guadalupe Uribe 1, Trinidad Uribe Partition of the Juan V. Borrego Grant, rigged up, stdg.

Permits

(*Continued from page* 90)

HARRIS COUNTY—L. B. House, Houston, Rosenthal, 17, 1, Jas. Strange sur, 150 ft from n and 25 ft from e line, blk 2.

HOWARD COUNTY—Owen-Sloan Oil Co., Forsan, W. J. Flowers, 160, 1, S 42, B 41, T&P sur, center of ne¼.

HOOD COUNTY — A. A. Swanson, Granbury, J. B. Peters, 70, 1, J. Rose sur, 300 ft from n and 700 ft from w line.

HUTCHINSON COUNTY — Magnolia Pet. Co., Dallas, W. E. Herring, 935, 1, S 5, B M23 sur, 2970 ft from e and 330 ft from s line.

IRION COUNTY—Dixie Oil Co., Inc., McCamey, W. H. Williams, 1, S 1196, TT Ry. sur, center of se¼.

JACK COUNTY — Brazos River Gas Co., Wichita Falls, G. R. Clayton, 100, 1B, L. Knight sur, 700 ft from w and 800 ft from s line. Ruth Smith, Jacksboro, T. C. Eads, 20, 1, B 3, J. W. Williams sur, 150 ft from s and w lines.

KARNES COUNTY — A. Edmiston et al, San Antonio, W. S. Cochran, 4605, 1, McConnell sur, 700 ft from e and 150 ft from s line.

LIBERTY COUNTY—Harrison Oil Co. & Abercrombie, Houston, W. J. Blewett, 10, 1, S 125, H&TC sur, 175 ft from w and 50 ft from s line.

LIMESTONE COUNTY—Schubert & Yost, Dallas, S. J. Fenner, 30, 1, H. C. Hoskins sur, 150 ft from s and w lines. E. E. O'Byrne, Corsicana, S. W. Hancock, 37, 1, H. York sur, 450 ft from n and 900 ft from e line.

LOVING COUNTY—H. W. Martin, Pamps, J. J. Wheat, 80, 1, S 73, B 1, W&NW sur, 330 ft from nw and 2310 ft from ne line sec.

MILAM COUNTY—J. W. Kemp Oil Co., Taylor, J. R. Cone, 283, 1, J. Leal sur, 237 ft s of center of n line. Texas Co., Houston, G. A. Williamson, 191, 1, Liendo sur, 150 ft from n and w lines.

MOORE COUNTY — Shamrock O&G Co., Amarillo, Coffee, C, 360, 1, S 361, B 44, H&TC sur, 330 ft from n and e lines of se¼.

PECOS COUNTY—Cosby Prod. & Royalty Co., Fort Worth, M. A. Smith, 20, 4, S 24, B 194, GC&SF sur, 300 ft from w and 900 ft from s line sw¼ of ne¼. Cardwell Oil Co., San Angelo, F. E. Toborg, 320, 11, S 539, A&B sur, 750 ft from s and 714 ft from w line sec. Dixie Oil Co. Inc., McCamey, J. H. Tippett, 6, S 61, B 194, GC&SF sur, ne corner.

PANOLA COUNTY — Natural Gas Prod. Co., Shreveport, J. R. Roquemore, 113, 12, B. C. Jordan sur, sw corner.

STEPHENS COUNTY — G. S. H. Cooze, Breckenridge, R. F. Brown, 109, 1, J. G. Garrett sur, ne corner. Anderson-Pritchard Oil Corp., Breckenridge, W. H. Green, 560, 1, S 2, HT&B sur, 1980 ft from s and e lines of sec.

SHACKLEFORD COUNTY — P. S. Kendrick, Albany, Kendrick, 11, 3, S 1, Blind Asy. sur, 150 ft from n and w lines.

THROCKMORTON COUNTY—T. B. Knox, Breckenridge, Reynolds, 160, 3, B 47, Comanche sur, 375 ft from w and 150 ft from s line. Woodley Pet. Co., Abilene, S. R. Rooge, 160, 1, S 247, BBB&C sur, 450 ft from s and 150 ft from e line sw¼.

TRAVIS COUNTY—W. A. Allen, Austin, S. Smith, 60, 1, L. Kimbor sur, 150 ft from ne and 400 ft from se line.

UPTON COUNTY — Humble O&R Co., Wichita Falls, M. G. Damron, 300, 1, S 192, B F, CCSD&RGNG sur, 330 ft from n and w lines.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, W. H. Cooke, 86, 2, M. Gross sur, 675 ft from e and 225 ft from s line. R. A. Howell, 22, 2, McPhail-Gross sur, 225 ft from w and 804 ft from s line. E. L. Fowler, 32, 8, I. Walling sur, 110 ft from w and 450 ft from s line. F.&M. Drilling Co., Houston, F. R. Flanagan, 1, 1, M. Gross sur, 12 ft s of center of n line.

WARD COUNTY—Rector Oil & Cosden Oil Co., Midland, E. R. Allen, 56, 1, S 15, B 5, H&TC sur, 185 ft from n and e line sec. Grand Falls Oil Co., Big Springs, Blair, 10, 1, S 11, B5, H&TC sur, 150 ft from ne and nw lines. I. D. Kuch et al, Dallas, Wallace, 135, 1, S 19, B 34, H&TC sur, 330 ft from ne and se lines.

WASHINGTON COUNTY—Oliver Drilling Co., Houston, I. Hahn, 77, 1, Alcorn sur, 578 ft from n and 680 ft from w line.

WICHITA COUNTY—Ino. A. Dixen Wichita Falls, Chilson, 120, 1, DCSL sur, 150 ft from n and e lines of blk 24. C. C. Julian Oil & Royalties Co., Fort Worth, W. W. Overby, 80, 13, J. M. Sharp sur, 150 ft from n and 450 ft from w line. A. T. Russell, Electra, Harrison, 70, 2, sec 12, 150 ft from n and 1015 ft from w line.

WILBARGER COUNTY—Zenith Oil Prod. Co., Fort Worth, M. J. George, 10, 1, B 29, J. Pointevent sur, 150 ft from n and e lines.

WILLIAMSON COUNTY — De Long-Schlickeisen, Fee, 1, C. C. Browning sur, 1500 ft from w and 600 ft from s line. C. C. McGarity, Rockdale, O. Simmons, 3, 1, H. Owen sur, 150 ft from s and w lines.

YOUNG COUNTY—Terrell & Willis, Newcastle, V. R. Jordan, 177, 1, L. Fortune sur, 150 ft from s and w lines. F. A. Clarida et al, Loving, S. Bagley, 80, 1, J. B. Franklin sur, 150 ft from n and w lines. Nash & Windfohr Oil Corp., Graham, E. S. Graham, 2, 3410, TE&L sur, 250 ft from n and 4000 ft from e line. Willis, Terrell & Watola, Newcastle, Gathright, 40, 1, 275, TE&L sur, 150 ft from s and e lines of sw¼. R. L. Crawford, Olney, L. D. Garrett, 80, 1, 305, TE&L sur, e central part of se¼. F. G. Howard, Fort Worth, T. J. Routon, 140, 1, TE&L sur, 250 ft from n and 500 ft from e line. King Royalty Co., Wichita Falls, C. Graham, 40, 7, 2249, TE&L sur, 406 ft from e and 150 ft from s line. Midland Oil Co., Fort Worth, E. C. Keith, 20, 1, 268, TE&L sur, 40 ft from n and 150 ft from w line ne¼. W. H. Hammon, Wichita Falls, Jeffery, A. 40, 1, 41, TE&L sur, 150 ft from w and 457 ft from s line. Seitz, Comegys & Seitz, Wichita Falls, W. T. Finch, 20, 3, 31, TE&L sur, 150 ft from s and w lines.

ZAPATA COUNTY—S.R.&C. Oil Corp. San Antonio, E. Trevino, 40, 1, S 2B5, 300 ft from s and w lines of blk 15. Nordan & Morris, Laredo, D. Bustamente, 208, 1, 10 Comitas sur, 3315 ft from nw and 450 ft from ne line. J. H. Winch, Laredo, A. Bustamente, 40, 2, 5, blk 7, 450 ft from nw and 150 ft from ne line.

EAST TEXAS

CASS COUNTY—Wesley et al's Henderson 1, C. C. Bailey sur, dk. Texas Co.'s Citizens State Bank 1, Jos. Watkins sur, top chalk 2260 ft, top Pecan Gap 2860 ft, dr lime and shale 3781 ft. Jno. C. Rodgers' Lanier 1, K. A. Welborne sur, claim gas show,coring gummy lime 2257 ft. Williams 1, Moses Frazier sur, dk pat. Phillips Pet. Co.'s J. R. Olds 1, J. Stephenson sur, dr chalk 2200 ft (no recent report.)

HARRISON COUNTY — Shell Rock Pet. Co.'s Daugherty 1, Burris sur, co to deepen, td 3520 ft.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, claim oil show in 2 ft hard chalk 1882-4 ft, sd, no cas set, td 1887 ft.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, oil show in lime 6⅝-in cas 2670 ft, dr, no show at 2732 ft, dr sandy shale 2759 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, 8⅛-in cas 2027 ft, dr hard lime 2740 ft. Ark. La. P. L. Co.'s Brumble A-2, B. C. Jordan sur, 7-in cas 4480 feet. Creighton & Hart's Kyle 1, J. Tippett sur, top chalk 1444 ft, top Blossom 2216 ft, dr hard lime 3380 ft. Warren & Dawes' McNeese 1, A. Booker sur, dk. W. G. Banks' Baldwin 1, Hampton West sur, rig. Texas La. Prod. Co.'s Baker 1, B. C. Jordan sur, dr hard lime 3085 ft. Natural Gas Prod. Co.'s H. H. Alvord 1, B. C. Jordan sur, 10-in 1160 ft, dr 1800 ft. Texas Co.'s G. W. Brumble 3, Evans Bracken sur, old well, dr deeper, dr shale 2260 ft.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, 9-in OD cas 4150 ft, dr 4512 ft.

SHELBY COUNTY — C. R. Ridgeway's Parker 1, Jesse McKelvey sur, 9-in cas 1831 ft, tested sw in sandy lime, sd wo 3015 ft. Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd 3300 ft.

TEXAS GULF COAST

AUSTIN COUNTY—O'Hara et al's Schrader 1, stdg. Empire's Kunze 1, San Felipe, stuck drill stem at 5187 ft. R. Hardy B-3, e edge Raccoon Bend, ru.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash Dome, dr in sand at 5688 ft. Steel & Strickland's Lochridge 1, near Lochridge, shut down. Rycade's Wisdom 27, Nash Dome, dr in hd sn at 4367 ft. Rycade & Amerada's Seaburn 1, Stratton Ridge, coring sn at 4144 ft. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, shale at 3930 ft. The Texas Co.'s Ewing 1, Manvel, fsh for 3-inch drill stem at 7589 ft. J. H. Murdock 1, Fresno, drilling in sh at 6505 ft. Mills Bennett's Allen 2, Allen Dome, Randon 1, Allen Dome, abn in hd sn at 5201 ft. United Oil Syndicate's Speers 1, 3 mi n Danbury, shale at 296 ft.

CHAMBERS COUNTY—Pure's Lost Lake 5, woc; Mayes 12, Lost Lake, woc. Shell's Herff 2, Moss Bluff, 5557 ft in sn li. Chicago Oil Corp.'s Lawrence 1, 10 mi s of Barbers Hill, sn and sh at 4080 ft.

GALVESTON COUNTY—Gulf's Smith 10 High Island, hd sn at 5175 ft.

GRIMES COUNTY—Wainwright-West Oil, Ltd.'s Templeman 1, 6 mi s Navasota, shut down at 3505 ft. D. M. Byrd & R. H. Dearing et al's Muenker 1, ½ mi n Anderson, dr at 3498 ft, dr in gbo at 3521 ft.

HARDIN COUNTY—D. O. Speight's Gidrey 1, 4 mi s Batson, gbo at 2920 ft.

HARRIS COUNTY—Humble's Simms-Smith 78, Goose Creek, pulling casing; Minnetex 4, Mykawa, sh and li at 3018 ft. W. C. Turnbow et al's Miller 1, 2 mi s Deer Park, dr in sh and li at 4350 ft. Mrs. J. C. Baldwin's Kittman 1, 2 mi n Cypress, shut down. Gulf States Oil Co.'s Augsperger 1, 8 mi n Houston, 3090 ft in lime.

JACKSON COUNTY — Jackson Co. Oil Synd.'s Drushell 8, Edna, shut down; Lee 2, Edna gas field, dr in sand at 4140 ft. Warner-Quinlan's Hungerford 1, Henry Smith sur, dk.

JEFFERSON COUNTY—The Texas Co.'s Pipkin 4, Big Hill, hd sn at 3570 ft, cored 3480 ft, salt ws. Humble's McFadden 1, 8½ mi e Big Hill, dk substr.

LIBERTY COUNTY—Saxet Oil Co.'s Davis 2, n Dayton, set 1 jt of 4½-inch scr, tested sw. Harrison Oil Co.'s Quintette 4, salt at 5012 ft. Harrison-Abercrombie's Jones 1, woc. Yount-Lee's Moores Bluff 3, Esperson Dome, stuck drill stem at 7822 ft. Gulf's Ezzell 1, Hankamer, sn and sh, set 7-inch csg at 5792 ft. Humble's Breeden 1, Moss Bluff, dr in sn at 6629 ft; Hylton 1, Moss Bluff, dr in shell at 6534 ft; Sergent 1, sh and li at 5758 ft.

MATAGORDA COUNTY—Empire's Bokar 1, Citrus Grove, drilling deeper. Cockburn Oil Corp.'s Hawkins 2, Shepherds Mott, coring sand at 5026 ft.

MONTGOMERY COUNTY—Price & Wilhite's Juergus 2, 3 mi n Conroe, shut down. Lake Creek Oil Co.'s Hunt 1, Conroe, shut down.

ORANGE COUNTY—The Texas Co.s Stark 2, Port Neches, swabbed to 3000 ft, show of some oil and gas.

WALKER COUNTY—Joyce Richardson et al's Smither 1, 12 mi n Huntsville, shut down.

WASHINGTON COUNTY—Clifton et al's Pruiss 1, 3 mi s Brenham, shut down.

WHARTON COUNTY—C. S. Thomas' Taylor 1, Boling, shut down; Volney 1, Boling, dr in sh at 508 ft. Givan et al's Hudgins 1, dr in gbo at 620 ft..

LOUISIANA GULF COAST

Completion

AVOYELLES PARISH—
R. A. Tippett, Chatalin 1..... * 3400

ACADIA PARISH — Yount-Lee Oil Co.'s Houssiere-Latrielle 9, Evangeline, showing gas and oil, well tried to blow out. Started out of hole and drill stem stuck at 7313, pulling ds.

ASSUMPTION PARISH—Poor Boys Drilling Co.'s LaBarre Est 1, 47-12s-13e, stdg.

AVOYELLES PARISH — R. A. Tippett's Chatalin 1, 5-1n-3e, abn at 3400 ft in sand. M. L. Vincent's Morrow 1, 14-2s-4e, sh and li at 4220.

CALCASIEU PARISH — Wilfred Lahay's Jardell 1, 25-10s-12w, dk. J. O. Davis' Ind. Lbr. Co. 1, Starks, dr in sn at 6323 ft. Union Sulphur Co.'s Martha Moss 1, Lockport, dr in sandy shale at 7083 ft. Dr. Thomas et al's Hewitt 1, lcn. Crawford Doyle's Johnson 1, nw flank Starks, dr at 375 ft in gbo.

CAMERON PARISH—Pure's Yount-Lee 10, Sweet Lake, ws at 2438 ft. Shell's Watkins 16, Black Bayou, dk. Black Bayou State 2, Black Bayou, lcn. Freeport Sulphur Co.'s Yount-Lee 4, Black Bayou, abn at 1308 ft in rock. Yount-Lee 5, Black Bayou, dr in rock at 1422 ft top of cap at 1404 ft. Vacuum Oil Co.'s Cameron Meadows 1, Cameron Meadows, 5175 ft in sand. The Texas Co.'s Calcasieu Lake State A-6, dr in anhydrite at 2369 ft; State East Hackberry 7, dr in sh at 5289 ft. F. R. E. Tr.'s John Vincent 1, Hackberry, drilling in lime at 1982 ft, mixing mud.

IBERIA PARISH—The Texas Co.'s Vermillion Bay 6, drilling plug.

IBERVILLE PARISH—Standard's Wilbert 8, Bayou de Blaise, shut down temporarily. Wilbert 7, Bayou Blue, dk. L. Baist Cooperage Co. 1, Bayou Blue, dk fdn. Schwing 1, drilling in sand at 4530 ft. Shell's Wilbert 5, White Castle, dr in pink sand at 4753 ft. Gulf's Gay 1, Bayou Choctau, sand at 1280 ft. Texas Gulf Sulphur Co.'s Wilbert 5, Bayou Choctau, dr in gyp at 617 ft top at 468 ft; Wilbert 6, lcn; Wilbert 7, lcn.

JEFFERSON PARISH—Humble's Delaware Fur. Co. 1, Barataria dome, abn at 7629 ft in sand and shale.

PLAQUEMINES PARISH—Humble's Cockrell-Moran 2, Lake Grande Ecaille, mixing mud at 1103. Garden Island Bay State 4, dr at 3536 ft.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, 28-11s-4e, swabbed salt water and no oil at 1834 ft, trying to pull strainer.

ST. MARTIN PARISH—The Texas Co.'s Iberville Ind. Co. 3, Hager dome, lcn. St. Martin L & Co. 5, Hager dome, dk. Rycade's Woodyard Lake 1, Bayou Bouillon, trying to sltr at 3750 ft, State 4, Bayou Bouillon hit cavity at 4477 ft, stuck drill stem at 200 ft off bottom, pulling on drill stem.

ST. TAMMANY—Washington & St. Tammany Drl. Co.'s Coussack 2, 5-6s-10e, repairing rig.

TERREBONNE PARISH — Chas. Paggi's Evergreen 2, Houma, shut down. La. Gas & Fuel Co.'s Minor Estate 1, Houma, sandy shale at 2691 ft with slight gas show. The Texas Co.'s Bay Junop 2, dr in sand at 6157 ft. Dog Lake A-3, dr at 6015 ft hit top of salt at 5906 ft. Callou Island State 4, lcn; Callou State 5, hit top of salt at 4092 ft, now drilling at 4647 ft in salt. Lake Pelto State 4, dk; 5, lcn; 6, ru. Bay St. Elaine 1, w.o.r.; 5, dr in coarse sand at 912 ft; 6, lcn; Lake Barre 6, lcn; 7, wo.r. Four Isle 4, dr in hard lime at 6841 ft reaming at 6790 ft.

MISSISSIPPI

Completions

HINDS COUNTY, (Jackson Dist.)—
Universal O&G Co., Holliday & Ross
1, 8-6-2e . ..... * 2653

RANKIN COUNTY, (Jackson Dist.)—
Pioneer O&G Co., Graves 1, 12-5-1e ,T40 2402

ALCORN COUNTY—Alcorn Pet. Co.'s Matthews 1, se se 14-2s-7e, fsh td 2735 ft.

ATTALA COUNTY — Ark. La. P.L. Co.'s Moore 1, se nw 2-15n-5e, top Selma chalk 2277 ft r to bottom td 2632 ft.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft 13⅜ cas 1389 ft dr 2310 ft.

COVINGTON COUNTY, (Collins Dist.)—Miss. Gulf O&G Co.'s Pope 1, nw ne 35-8n-16w, dk pat (formerly carried Fee 1).

CHICKASAW COUNTY — Hightower & Golson's Fleming 1, 30-13-3, driving 8¼-in pipe 1534 ft.

GRENADA COUNTY—Carter Oil Co.'s Dubard 1, nw nw 18-22-4e, dk.

HINDS COUNTY, (Jackson Dist.) — Mrs. Ella Rawls Reeder's State Land 1, sw nw 25-6-1e, sd 2905 ft. Jackson O&G Co.'s Central Cotton 1, sw nw 3-5-1e, dk. Love Pet. Co.'s Morton 1, sw sw 34-6-1e, set 6⅝ cas around 2390 ft. Maley 1, se nw 15-5-1e, elev 257.3 ft top Midway shale 2387 ft, top Midway chalk 2487 ft 6⅝ cas 2487 ft, making est 10 mil ft gas 10,000 bbls hot sw 100 bbls badly cut oil td 2495 ft. Miss. Tex. Oil Co.'s Negro Fair Assn. 1, nw se 28-6-1e, top Midway shale 2420 ft 6-in 2379 ft sd 2479 ft. Southern Pet. Co.'s Wilson 1, se ne 23-6-1e, dk. Universal O&G Co.'s Holliday & Ross 1, nw sw 8-6-2e, dry abn td 2653 ft. Shairbrough 1, sw se 28-6-1e, 10-in cas 88 ft lcn abn rig to be sold satisfy judgment td 88 ft. Miss. Pet. Co.'s Solvent 1, sw sw 14-5-1w, sd 2805 ft. Baptist Orphanage 1, se se 28-6-1e, 6⅝ cas 2481 ft top Midway shale 2422 ft, dr in. Howard Oil Co.'s Jackson College 1, nw nw 9-5-1e, rig. Atkisson et al's Wiggins 1, nw ne 23-6-1e, rig. Kennedy et al's Fee 1, ne ne 34-6-1e, lcn. Gulf Ref. Co.'s McLaurin 1, sw ne 30-6-2e, 9-in cas 2466 ft in Midway shale. Cane River O&G Co.'s Kabbes 1, ne sw 15-5-1e, elev 262 ft top Midway shale 2435 ft top Midway chalk 2541 ft 7-in cas 2541 ft, swabbed sw show gas 2560 ft, dr bro chalk 2684 ft. Love et al's Ridgeway & McGehee 2, 2-5-1e, rig.

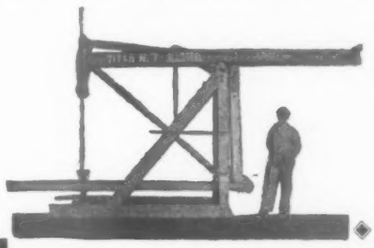
JASPER COUNTY, (Bay Springs Dist.)—Bay Springs Pet. Inc's J. H. Keyes 1, nw ne 21-2n-10e, rig.

KEMPER COUNTY, (De Kalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10-1w, rig up wo.

MADISON COUNTY, (Jackson Dist.) — Miss. Pet. Co.'s Raymond 1, nw sw 32-7-2e, 12½-in cas 706 ft sd wo 706 ft.

MONROE COUNTY, (Amory Dist.)—Am-



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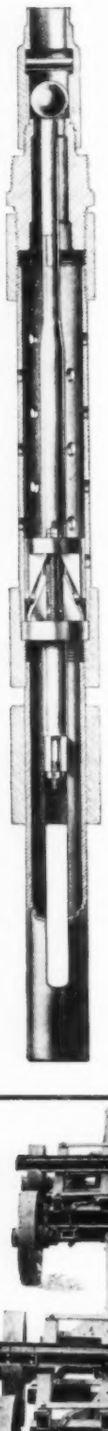

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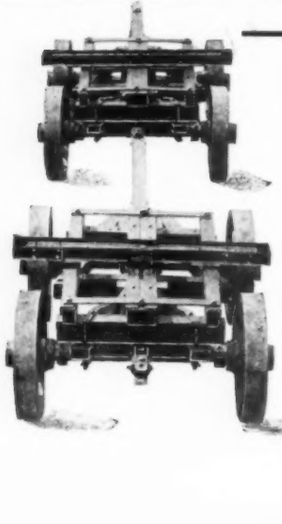

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ory Dev. Co.'s Bourland 1, 2-13-19e, sd in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-12-19, dr 550 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, dk. Carter 3, se se 7-13s-17w, 10-in 564 ft dr 1500 ft.

NESHOBA COUNTY, (Philadelphia Dist.)—Williams et al's Dees 1, se se 29-11n-12e, bldg dk.

RANKIN COUNTY, (Jackson Dist.)—Feazel O&G Co.'s Cox 1, 12-5-1e, dk. Sabine O&G Co.'s Rankin Dev. Co. 1, sw ne 6-5-2e, elev 273 ft wo cas in sandy shale td 2320 ft. Gulf Ref. Co.'s Hamilton Est. 1, sw sw 4-5-2e, elev. 284 ft top Midway shale 2537 ft, top Midway chalk 2620 ft 9-in cas 2610 ft r to bottom td 2978 ft in chalk. Love et al's Muse 1, se se 32-7-4e, rig. Pioneer O&G Co.'s Graves 1, nw se 12-5-1e, elev 268.8 ft, top Midway shale 2301 ft, 6⅝ od cas in shale 2383 ft, top Midway chalk 2391 ft making est 40 mil ft gas td 2402 ft. Wallace O&G Co.'s Cobb 1, se ne 12-5-1e, elev 269.6 ft top Midway shale 2290 ft 6⅝ cas 2375 ft. Southern Pet. Co.'s Ivy 1, ne sw 12-5-1e, elev 270 ft sp. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw se 6-5-2e, sp.

WARREN COUNTY, (Vicksburg Dist.)—Dixie Pet. Co.'s Clark 1, sw sw 31-17n-5e, dk. Vicksburg O&G Co.'s Dornbusch 1, sw ne 8-18n-5e, dr 1575 ft.

WEBSTER COUNTY—Cumberland Oil Co.'s Henley 1, 15-21-11, ta 1865 ft.

WINSTON COUNTY, (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, dr 1710 ft.

YALABOUSHA COUNTY, (Water Valley Dist.)—J. D. Collett et al's Blackmer 1, sw ne 14-11s-4w, fsh td 2434 ft.

ALABAMA

HOUSTON COUNTY—J. R. Sealey's Fee 1, 13-1n-27e, changing from cable tools to rotary td 3100 ft.

MORGAN COUNTY—Albany-Decatur O&G Co.'s English 1, 6-6-4, fsh cas 4130 ft.

SUMTER COUNTY—B. W. Bates' Fee 1, 3-18-1w, ta 1200 ft; Fee 2, 3-18-1w, rig up wo.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft. Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 708 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, dr hd lime 2025 ft.

NORTH LOUISIANA

Company, Wells and Location	Initial Production Bbls.	Depth
DE SOTO PARISH—		
Ark. La. P. L. Co., Johnson 3, 1, 11-14	*	3190
SABINE PARISH—		
Texas Co., Maines et al, 5-7-11	149	2421
Standard Oil Co. of La., Bowman-Hicks 1, 25-8-12	*	2713
Lohman & Walked, Hubley 1, 21-7-11	*	2550

BIENVILLE PARISH — Triangle Drilling Co. et al's McDermott 1, 28-18-6w, 6⅝-in cas 2174 ft, whipstocked at 2060 ft, tested dry at 2176 ft, sd, old td 3160 ft. S. P. Borden et al's Thomas 1, 27-16-9w, 7-in 4033 ft, coring lime 4250 ft. Carter & Dobbs' White 1, 9-18-6w, sd for fuel 2262 ft. Olds & Smith's Brice 1, 15-16-6w, top Cane River 530 ft, 6⅝-in cas 2156 ft, bailed down 1000 ft, no show, arr abn, td 2230 ft. Cagle Bros.' Lawhon 1, 15-16-8w, sp 10-in cas 108 ft, dr 450 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, 8-in cas 1471 ft, sd 1546 ft. H. I. Morgan et al's Kendricks B-11, ne nw 22-19-11, dr 520 ft. La. O. R. Corp.'s Bodcaw-Fee B-14, se sw 11-19-11, arr abn td 2502 ft. Rambaugh et al's Allison 1, 10-19-13, coring 1055 ft.

CADDO PARISH—Texas La. P. L. Co.'s Wall 1, 33-23-16, dr hard lime 4076 ft. French 1, sw nw 34-23-16, ds stuck 4694 ft, wo, r tool. Hunter Land & Inv. Co.'s Fee 1, 32-18-14, no report.

CATAHOULA PARISH—National Drilling

Co.'s Marsh McMillian 1, 26-9-6e, arr set 8-in cas, td 2850 ft.

CLAIBORNE PARISH—Triangle Drilling Co.'s Brownfield 1, nw ne 6-19-5w, 9-in cas 4034 ft. Baird Bros. et al's Whittaker 1, 30-20-7w, sd 2200 ft. Bough et al's Alexandria 1, 27-20-8w, sd 2200 ft. Prairie O&G Co.'s F. B. Shackleford 1, se ne 30-23-5w, 12½-in cas 611 ft, dr gumbo 2088 ft. La. O. R. Corp.'s Langston 10, 19-21-7w, junked first hole at 661 ft, skidded 10 ft west, sp new hole, dr 144 ft.

CALDWELL PARISH — Hudson et al's Burton 1, 36-12-2e, sd 2230 ft.

CONCORDIA PARISH — Glassell et al's Britton-Koontz Nat. Bank 1, 20-8-10e, lcn abn. Joe Marr et al's Maxwell 1, 35-3-8e, 8-in cas 2000 ft, dr shale 3600 ft.

DE SOTO PARISH—J. W. Clark's Tidwell 1, 22-13-14, 6⅝-in cas 2910 ft, dr, show oil, sd 3084 ft. W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, wo cas to test gas show td 1657 ft. Standard Oil Co. of La.'s Dowling Bros. 1, sw sw 32-14-13, 6⅝-in cas 2813 ft, 13 ft brown sand, td 2826 ft. Neff et al's Dowling 1, se se 18-13-14, 10-in cas 42 ft, dr 200 ft. Ramsey 1, 33-13-16, dk. S. A. Guy et al's Dowling Bros. 1, 31-14-14, sd 1354 ft. Ark. P. L. Co.'s Johnson 3, 1-11-14, dry abn, td 3190 ft. J. M. Bridges, Tr.'s, Cook 1, sw ne 16-10-11, lcn.

LA SALLE PARISH—La. G&F Co.'s Tensas-Delta B-2, sw ne 23-7-4e, lcn.

NATCHITOCHES PARISH—Gulf Ref. Co.'s Bodcaw Lbr. Co. 1, sw ne 13-13-8w, dr 928 ft. W. M. Coates et al's Collins 1, 28-9-10, base chalk 2612 ft, sd 3710 ft. J. W. Cooper et al's Cooper 1, 35-11-10, r to bottom in hard chalk, td 1600 ft. Cooper 2-A, 35-11-10, rig up heavy rig, td 1150 ft.

RED RIVER PARISH—Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, sd 3010 ft. T. G. Shaw's Wilkinson 1, se se 4-12-10w, 6-in cas 2240 ft, 700 ft oil in hole, arr deepen, td 2838 ft.

RICHLAND PARISH—W. C. Feazel's Landrum 1, 6-16-7e, dk. Island O&G Co.'s Noe 1, 3-16-5e, 6-in cas 2350 ft, top Monroe gas rock 2365 ft, sd in shale 2630 ft.

SABINE PARISH—McDaniels et al's Batson 2, 16-8-12, 6⅝-in cas 2190 ft, bailing to test, td 2553 ft. Lacey Jesup Oil Co.'s Brown Lbr. Co. 1, se ne 28-8-10, dr 2115 ft. Lacey Prod. Co.'s W. M. Cooper 1, 30-8-11, top Zwolle chalk 2306 ft, 6⅝-in cas 2270 ft, claim gas show td 2360 ft. Cooper 2, nw sw 32-8-11, sp, junked hole, skidded over, rig up for new hole. A. H. Teat's Craig 1, ne ne 25-8-12, top marl 2329 ft, 6⅝-in cas 2329 ft, dr chalk 2560 ft. Eylers O&G Co.'s Fraser 1, nw sw 10-8-11, elev 317 ft, top Zwolle marl 2160 ft, 8¼-in cas 2150 ft. R. L. Gay, Tr.'s, Bowman-Hicks 9, ne sw 18-7-13, 6⅝-in cas 2187 ft, tested dry, sd 2520 ft. Sabine Lbr. Co. A-1, se ne 1-7-12, sp, 10-in cas 62 ft, dr 400 ft. D. H. Reddick et al's Scretchfield 1, 18-9-12, sd 3310 ft. Paramount O&G Co.'s Woolums 1, 11-6-12, 6-in cas 2310 ft, top Zwolle chalk 2776 ft, sd 2782 ft. Zeke Lohman's Wyatt Lbr. Co. 1, 18-4-11, partly rigged up wo. Lohman & Walker's Hubley 1, 21-7-11, top marl 2461 ft, 6-in cas 2432 ft, dry abn, td 2550 ft. Pelican Nat. Gas Co.'s La. Long Leaf 6, nw sw 4-7-11, 6-in cas 2291 ft, 2000 ft oil in hole, made small heads, arr set packer, td 2357 ft. La. Long Leaf 7, nw sw 10-7-11, lcn. Sabine 6, 12-7-12, top marl 2311 ft, 6-in cas, 2309 ft. Philp et al's Turner 1, nw nw 4-7-11, lcn. Texas Co.'s Maines et al 1, ne se 5-7-11, 6⅝-in cas 2283 ft, gauged 149 bbls day, td 2341 ft. Stokes 1, nw se 10-7-11, dk. pat. Longoria et al's Belton 1, 31-9-12, rig. Franks et al's Hays 1, 22-8-11, sd 1325 ft. David M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-in cas 2385 ft, sd 2800 ft. Sabine 1, 12-7-12, rig. W. M. Coates' Sabine 1, 1-7-13, 6⅝-in cas 2185 ft, cor 2195 ft. Wilson & Sons' Gandy-Garrett 1, 4-5-12, ur 1815 ft. Toteco Oil Co.'s La. Long Leaf 1, 18-6-12, 6⅝-in cas 3965 ft, dr lime 4217 ft. Tom David's Smith 1, 27-8-10, dr 2150 ft. Merritt et al's La. Long Leaf 1, 38-8-11, 6-in cas 2245 ft, sd 2270 ft. Standard Oil Co. of La.'s Bowman-Hicks 1, 25-8-12, top marl 2360 ft, 6⅝-in cas 2350 ft, dry, abn in chalk 2713 ft. Harver et al's Baker 1, nw ne, 36-8-12, sp 12½-in cas 125 ft. C. W. Robinson's Trammell 1, ne ne 5-7-11, rig. Jno. Woodley's Sabine 1, ne se 12-8-12, lcn. H. W. Perritt's Bowman-Hicks 1, 2-7-12, arr set 6-in cas 2182 ft. R. B. Whittle's Sabine Lbr. Co. 1, sw sw 36-8-12, sp, 10-in cas 150 ft. J. W. Clark's Lites 1, se nw 34-8-11, sp 10-in cas 105 ft. Frank Melat's Sabine 1, ne sw 6-7-11, dr 1955 ft. Sabine 2, ne nw 14-7-12, lcn.

TENSAS PARISH—Seip et al's Fowler 1, 10-10-10e, sd 905 ft. A. R. Willis' Curry 1, 39-11-12, sd 2780 ft.

WEBSTER PARISH—Gerhig Co.'s Miller 1, ne sw 16-18-10, sp, 12½-in cas 200 ft. D. H. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, lcn.

KANSAS

SUMNER COUNTY — Davidson et al, Strickland 1, sw se 12-34-1w, abn.

MORTON COUNTY — Hydraulic Oil Co., State land 1, nw se, 22-34-43w, td 3460 ft, fsh 5-inch.

HARPER COUNTY—Atkinson et al, Misak 1, se c 25-32-6w, 8-inch 4635 ft, dr 4948 ft.

SUMNER COUNTY—Disney et al, Foy 1, c e½ se 14-34-1w, abn.

STEVENS COUNTY—McNabb and Mid-Kansas, Rinehart 1, c ne, 23-32-39w, 15-inch 570 ft, dr 1600 ft.

COWLEY COUNTY—Tom Fine, Boyd 1, nw ne, 32-32-4e, 12-inch 1265 ft, sd 2650 ft. Roth and Faurot, Reidy 1, c sw nw ne, 8-32-4e, td 912 ft, fsh blr.

HARPER COUNTY—Beeker et al, Bear 1, c ne, 21-31-6w, td 1830 ft, sd.

KIOWA COUNTY—Phillips-Prairie, Bean 1, ne se 10-30-17w, 3950-55 ft, td 5117 ft, fsh tools and bailer.

BARBER COUNTY — Allison & Fitzwilliams, Kumberg 1, c se sw se, 2-30-12w, 6-inch 4324 ft, dr 4330 ft.

GRANT COUNTY—McKenna et al, Sullivan 1, ne c 12-29-28w, 8-inch 2435 ft, dr 2645 ft.

SEDGWICK COUNTY — Buck et al, McNanaman 1, c ne nw nw 2-20-1e, rig.

ELK COUNTY—Alladin, Donnell 1, ne se sw, 26-29-10e, Wilcox 2386-2411 ft, so, sd.

KIOWA COUNTY—McKenna et al, Ralston 1, c ne, 14-28-20e, ru sd.

BUTLER COUNTY—Farrell et al, Sutter 1, nw c 18-28-7e, td 1875 ft, fsh pipe.

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KINGMAN COUNTY—Skelly, Miles 1, ne c 30-27-10w, 10-inch 2459 ft, td 2459 ft, sd.

SEDGWICK COUNTY—Streeter & Stearns, Tobin 1, c sw se ne 5-27-2e, dr 1327 ft.

PRATT COUNTY—Wilcox, Unknown 1, sw nw 7-26-15w, td 4395 ft, hfw, csg trbl.

FORD COUNTY—Swain et al, Kenthorn 1, c nw, 21-25-24w, 6-inch 3775 ft, sd 4300 ft.

RENO COUNTY—Shell et al, Popp 1, nw c 11-25-5w, Wilcox 3901-10 ft, hfw, dr 3930 ft.

GREENWOOD COUNTY — Staats et al, Swan 1, ne nw 3-25-12e, spd and sd.

RENO COUNTY—Braden et al, Theisen 1, se ne 6-22-4w, 3475-95 ft, hfw, dr 3863 ft.

MARION COUNTY—Maidwell, La Master 1, nw c, 31-22-4e, sd 625 ft.

COFFEY COUNTY—Hegberg et al, Kroft 1, se sw se, 30-22-14e, 10-inch 818 ft. Roberts et al, Hay 1, sw se nw 32-22-15e, td 1250 ft, fsh.

RICE COUNTY — United Pet. Co., Wellman 1, ne c 29-21-9w, 5-inch 3435 ft, so, dr 3437 ft.

PAWNEE COUNTY—Phillips, Cuthberson 1, e ne 27-20-18w, td 3650 ft, dr on u.r. lugs.

BARTON COUNTY—McCool et al, Tsern 1, c sw se ne 12-20-11w, 12-inch 900 ft, sd 1600 ft.

RICE COUNTY—Gypsy, Koenig 1, sw ne, 10-20-10w, ru.

RICE COUNTY—Skelton Oil, Ott 1, c se se, 16-19-14w, sd 520 ft. Muth Bros., Beyers 1, ne nw 21-19-9w, 2000-2002, 3M gas, ur 10-inch.

McPHERSON COUNTY — United Pet. & Shell, Kaegi 1, ne c, 20-19-1w, spd. Henderson & Holden, Sommerfield 1, c ne sw, 23-19-1w, td 2100 ft, fsh.

LYON COUNTY—Griffith et al, King 1, nw c 8-19-10w, 12-inch 910 ft, sd.

RUSH COUNTY—Syndicate Oil, Tannen 1, c sw 11-19-16w, td 1042 ft, rng 12-inch.

RICE COUNTY — Allison & Fitzwilliams, Blake 1, ne nw, 9-18-10w, rig.

RICE COUNTY—Streeter & Stearns, Blake 1, ne nw, 9-18-10w, lcn. Jasper & Beschka, Cupp 1, sw ne 22-18-9w, sil. L. 3414 ft, hfw, dr 3450 ft.

McPHERSON COUNTY—Alladin Pet., Larson 1, c nw, 22-18-4w, rig.

MARION COUNTY—Alladin Pet., Rudolph 1, nw ne, 36-18-3e, sd 250 ft.

NESS COUNTY—Gypsy, Coleman 1, c sw ne, 25-17-25w, rig.

McPHERSON COUNTY—Slick et al, Sandell 1, c sw sw, 35-17-3w, 15-inch 510 ft, dr 1680 ft.

MORRIS COUNTY—Urchell et al, Bersuch 1, c nw se nw 10-17-17e, ru sd.

ELLSWORTH COUNTY—Alladin & Marland, Barecky 1, c nw, 3-16-10w, 8-inch 2718 ft, sd 2718 ft. Alladin et al, Stoddenberg 1, c sw, 22-15-10w, dr 460 ft.

MORRIS COUNTY—Urschell et al, Scott 1, ne sw 6-16-6e, sd 2420 ft. Hankenson et al, Sessnum 1, sw se 24-16-9e, rig.

RUSSELL COUNTY—Empire, Sherwood 1, c se nw nw 21-14-13w, td 3278 ft, ur 5-inch.

ELLSWORTH COUNTY — Milton et al, Kester 1, se ne 6-14-9w, sd 330 ft.

SALINE COUNTY—Sampson et al, Suderorf 1, ne se 30-14-2w, dr 180 ft.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw, 31-14-15e, sd 410 ft.

GOVE COUNTY—Valerius et al, Todd 1, nw c 24-13-27w, 3600 ft, water in hole, dr 4467 ft.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, sd 2740 ft.

SALINE COUNTY—Twin Mounds Oil Co., Weis 1, c w½ ne nw, 30-13-4w, td 2500 ft, sd.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw 13-13-2e, sd 2955 ft.

GOVE COUNTY — Johnson & Atlantic, Wright 1, c se ne 11-12-27w, 3500-3510 ft, hfw td 3510 ft, co.

PAWNEE COUNTY — Central Commercial Helms 1, se ne 2-12-20w, td 4095 ft, hfw, sd.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne, 33-11-13w, sd 2155 ft.

GRAHAM COUNTY — Schleimeyer et al, Clark 1, c sw ne ne 11-9-25w, dr 2972 ft.

CLAY COUNTY—Nebraska Oil, Tivier 1, sw c 19-8-3e, sd 2390 ft.

MARSHALL COUNTY—Swicker & Simcox, Remple 1, c nw nw 24-4-9e, sd 1295 ft.

WASHINGTON COUNTY — Simcox, Penwell 1, nw se ne 16-3-3e, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw e 3-2-35w, td 2005 ft, fsh tools.

MARSHALL COUNTY—Balzier et al, Runkel 1, se nw 13-2-6e, spd and sd.

OKLAHOMA

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair, Share 1, c ne sw, hfw 7160-7280 ft td, pb shot 100 qts 5080-5100 ft, 3500 ft water in hole, pb to 4885 ft shot 100 qts 4827-77 ft.

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mumner et al, Sornick 1, nw c se, se surface pipe. T 27n, R 2e, Sec. 17, Blankenship et al, Hansen 1, sw nw sw, shot 10, 20, 40 qts 3587-97 ft, pump 15 bbls.

GRANT COUNTY—T 26n, R 5w, Sec. 25, Bu-Vi-Bar et al, Hurst 1, c sw, show oil and water 5215-18 ft, td 5877 ft, hfw, to abn.

KAY COUNTY — T 26n, R 1w, Sec. 32, Boucher et al, Jefferson 1, ne c sw, dr by 12-inch at 1175 ft.

HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire, Bruce 1, sw c ne ne sw, slight show oil 7161-73 ft, dr 7250 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden, Vollmer 2, ne c se ne sw, lost tools, sd 5640 ft.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, 4660 ft, ru to deepen.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer, White 1, se c nw, sd 5825 ft.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall et al, Minks 1, nw c sw, sand 3050-55 ft, hfw.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co., Phillips 1, c nw sw, dr 4246 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey & Consolidated Drlg. Co., Quier 1, se c sw, sd 3970 ft. T 17n, R 4w, Sec. 34, Eason Oil Co., Katchor 1, sw c ne sw, sand 4918-42 ft, flowed 680, averaged 340 for past week. T 17n, R 2w, Sec. 24, Slick Ramsey & Prairie, Jones 1, c se nw, cored 5678-94 ft, no show.

KINGFISHER COUNTY — T 15n, R 5w, Sec. 23, Prairie & Slick, Wright 1, c nw sw, td 6600 ft, may abn.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley et al 1, se c sw, spud.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig. T 22n, R 3e, Sec. 26, Wentz Oil Corp., Lillie 1, se c sw ne, dr 3588 ft. T 22n, R 5e, Sec. 2, Sherry et al, Milsap 1, se c sw, dr 1155 ft. T 20n, R 5e, Sec. 1, Flynn, Morgan et al, Freeman 1, nw c, Wilcox 3645-78 ft, hfw, dry and abn.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic, Beebe 1, sw c ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 9e, Sec. 3, Tulsa Oil Co. et al, Davis 1, se nw sw, hfw 2765-80 ft, Wilcox 4073-85 ft, water, pb to 3375-88 ft. T 12n, R 9e, Sec. 36, Henry Oil Co., Harjo 1, nw c, Wilcox 4124-57 ft, water, pb to 3200 ft. T 12n, R 10e, Sec. 3, Shepperd et al, Sheppard 1, se nw sw, sd 3690 ft.

MUSKOGEE COUNTY—T 11n, R 19e, Sec. 21, E. Mills et al, Martin 1, nw c se, sd 1001 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw c nw se, shot 130 qts 5660 ft, dr 5674 ft. T 8n, R 14e, Sec. 14, C. D. Cannady, Smith 1, nw c, rig and tools. T 7n, R 13e, Sec. 18, Apex Oil Co., Walker 1, nw c se, dr 1595 ft.

OKLAHOMA COUNTY—T 14n, R 3w, Sec. 32, Mid-Kansas, Messer 1, sw c, shot 90 qts 6690-6760 ft, shot 170 qts, flow 425 bbls, shut in. T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph Orphanage 1, sw ne sw se, sd 6700 ft, td.

McCLAIN COUNTY—T 7n, R 2w, Sec. 22, Prairie & Slick, Perkinson 1, sw c nw, dr 6805 ft.

CLEVELAND COUNTY—T 6n, R 1e, Sec. 20, Harris & McNeal, Corbett 1, c sw ne, td 6518 ft, slight show oil and water, sd.

OKFUSKEE COUNTY—T 11n, R 8e, Sec. 11, Carter et al, Keys 1, sw ne sw, dr 4115 ft, swabbed 45 bbls some water.

POTTAWATOMIE COUNTY—T 10n, R 4e, Sec. 10, Shell, Baker 1, nw c se, lcn.

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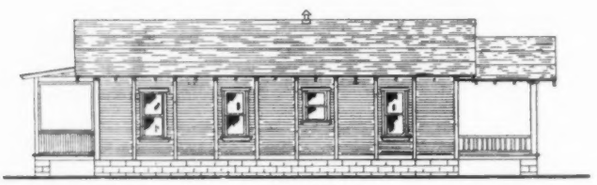

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SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

POTTAWATOMIE COUNTY—T 9n, R 4e, Sec. 14, C. F. McGee et al, Eckridbe 1, se c nw, lcn. T 7n, R 3e, Sec. 19, Droppleman & Burke, Fundis 1, se c ne, 8-inch at 4650 ft. T 6n, R 5e, Sec. 5, Robinson & Hicks, Crouch 1, nw c sw, dr 4266 ft, show oil.

HUGHES COUNTY—T 6n, R 9e, Sec. 20, Gilcrease Oil Co., Deere 1, ne c sw, ur 10-inch 1265 ft.

ROGER MILLS COUNTY—T 13n, R 21w, Sec. 10, Richfield O&R, Hiatt 1, se c, rig. T 12n, R 24w, Sec. 23, Bucy & Stone, Williams 1, c sw, sd 2243 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

CADDO COUNTY—T 9n, R 13w, Sec. 18, J. J. Wright & Shell, Boys 1, ne c lcn.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al, Cliffel 1, nw c, sd 1265 ft. T 7n, R 21w, Sec. 23, H. A. French et al, Murphy 1, sw nw se, sd 600 ft, hole caving.

CADDO COUNTY—T 6n, R 11w, Sec. 24, Simms & J. R. Wrightsman, Cobza 1, swc nw, dry and abn 4256 ft.

HARMON COUNTY—T 4n, R 24w, Sec. 17, Harmon-Tex Oil Co., Headley 1, ne c, sd 2593 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat. Gas Co., Doebel 1, ne c sw sw sw, sd 1450 ft.

HUGHES COUNTY—T 5n, R 10e, Sec. 30, Erwin et al, Jones 1, se c ne, dr 4315 ft. T 5n, R 11e, Sec. 15, J. J. Wright, Roberts 1, se c sw, sd 1645 ft.

COAL COUNTY — T 3n, R 9e, Sec. 26, Blackwell, Gumm 1, nw c, dr 5055 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, nw c, show gas 360-72 ft, sd 500 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co., Anderson 1, c se ne se, dr by pipe 2400 ft, td 2580 ft.

LOVE COUNTY—T 6s, R 3w, Sec. 20, Harry Hobbs, Steele 1, sw c ne ne sw, sd 3130 ft.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson, Ussery 1, se c, sd 325 ft. T 6s, R 9e, Sec. 25, O. P. Bush, Commerce Trust Co. 1, ne c, sd 600 ft. T 7s, R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne c se, sw, sd 475 ft.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-57-97, td 4080 ft.

CARBON—Producers O&G Co., Blivens 1, 32-12-92, 5M at 700 ft. Midwest's U. P. 27, 11-20-81, dr 1275 ft. Petroleum Exploration Co. of Calif., 29-23-89, show oil and gas at 800 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 2000 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-44-96, sdtr 304 ft, 6⅝-in. cas in hole, td 445 ft. P. & R. L., 33-34-92, ream 4785 ft. Yellowstone Oil Co.'s 1, 15-39-92, td 185 ft.

HOT SPRINGS—Midwest Ref. Co.'s Weeks 8, 6-44-98, abn 4520 ft.

LINCOLN—Mountain Oil Corp.'s 1, 36-25-116, sd to clear titles, td 1100 ft. Wyo. Prod. Co., 14-24-113, dr 1050 ft.

NATRONA—Summit Oil Co., 21-33n-80w, td 600 ft. Midwest's 11, nw 32-34n-77w, dr 1860 ft.

NIOBRARA—West Virginia Synd., ne 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-27-101, oil and gas show 8250 ft, test.

SWEETWATER—Vermillion Oil Co.'s 1, se 16-12-99, dr bel 3200 ft, carry 8⅝-in.

UINTA—Park City O&G Co., nw 6-15-113, set 6¼-in at 2150 ft, prep to res.

NEW MEXICO

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, repairs at 3005 ft.

LUNA—Angelus Oil Mining Assn.'s 1, se 20-21s-10w, dr 5915 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms. et al's A. T. S. F. 1, se 19-18-9w, dr 1900 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, dr 1324 ft.

QUAY—Silverstein et al's Wetzel 1, 29-12n-33e, stand 175 ft.

RIO ARRIBA—Berringer et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 15-29n-7w, dr 751 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, prep to res, 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, repairs 2018 ft. Childers Dr. & Pr. Co.'s Westwater 2, nw 23-31-16w, sd 2525 ft. Rio Grande Dev. Co.'s Lanier 2, 9-29-11w, stand 1380 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, dr 3944 ft. Murchison Oil Co.'s Angels Peak 4, se 11-28-11, dr 1861 ft. J. H. Witt O&G Co.'s Mangum 1, se 33-29-11w, mvg in.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2355 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, dr 3375 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, dr 740 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 2-12n-22e, dr 1464 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, stand 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-17s-7e, wtg repairs 1320 ft.

VALENCIA—Acme Oil Co.'s N. M.-Ariz. Land Co.'s 1, 26-6-3, dr 4728 ft. Harlan et al's Harlan 1-A, 5-6n-2e, dr 3942 ft.

COLORADO

ADAMS—N. M. Slatt's Hills 1, se 27-26-64w, 10-in. at 2500 ft.

ARAPAHOE—McDebb Dr. Co.'s Fitzsimmons 1, 7-45-55, ready to dr ahead 5692 ft. Merrett et al's U. P. 1, nw 17-5s-64w, stand 1600 ft, hfw.

ARCHULETA—Stand. of Colo., Fitzhugh 1, se 32-33n-1e, stand 502 ft.

BACA — A. R. Jones Oil & Optg. Co.'s Boice Cattle 1, 22-34s-42w, dr 4100 ft.

ELBERT—Belmont Oil Co.'s Maher 1, sw 4-6s-59w, prep to res 3720 ft.

EL PASO—Utemore Synd., Cannon 1, ne 10-16s-66w, stand. 1100 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-59w, dr 2809 ft.

LARIMER—Smith et al's State 2, ne 36-12-70w, dr 343 ft.

LA PLATA—McGarr Pete Co.'s Mesa 1, ne 27-33n-12, to shoot show 3310 ft. McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, prep to spud. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, dr 2760 ft. Murchison Oil Co.'s Doescher 1, nw 9-33n-13w, sd 1225 ft, for winter.

LINCOLN—Kelley Oil Co.'s State 1, 26-14n-57w, stand 3415 ft.

MOFFAT—Vermillion O&G Synd.'s 1, se 23-9n-100w, stand 750 ft. Mtn. Fuel Supply's State 2, tract 37-12-100, sd.

MONTEZUMA—Haller et al's Haller 3, ne 33-36n-14w, prep to deepen from 764 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-7w, 8¼-in at 3670 ft.

PUEBLO—Kuykendall Oil Corp.'s Boescher 1, 7-22-66, to dd from 1000 ft. Anchor Oil Co.'s Easley 1, sw 35-22s-67w, dr 310 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, dr 1600 ft. So. Park O&G Co.'s Esche, ne 5-9s-76w, 10-in at 605 ft.

ROUTT—Gorham et al's Omholt 1, 29-4n-87w, ready to spud.

WELD—Platte Valley Pete Corp.'s Patterson 1, nw 24-6n-61w, stand 6667 ft. Eastman Oil Co.'s Steel 1, ne 14-2n-67w, sd 165 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4s-56w, dr 1672 ft.

MONTANA

CASCADE—Andover Oil Co.'s Floweree 1, se 20-21-2w, dr 1000 ft.

FERGUS—Northern State Oil Co. (Bock et al) Woodward 1, se 20-14n-24e, ur to lower 10-in, td 1000 ft.

GLACIER—Glacier Oil Co.'s Omsberg 1, nw 33-35-5w, sd 2805 ft. Texas Prod. Co.'s 1, 13-35n-6w, 2875 ft, 6 to 8M gas spray oil. Fulton Pete Corp.'s Blackfeet 1, ne 28-36n-12w, wait for fuel, td 850 ft. Hill-O'Neil's Michales 1, se 28-36-5w, straighten crooked hole 2310 ft. B. & H. Oil Co.'s Haines 1, se 2-34-6w, dr 2350 ft. Jeffries-Hoerr, Dawson 1, ne 7-31-12w, sd 2830 ft.

GOLDEN VALLEY—Texas Pacific's 1, sw 21-8s-21e, shut off water 1540 ft.

JUDITH BASIN—Newton-Waddingham, sw 15-16n-10e, dr bel 850 ft.

LIBERTY—Northland O. & G. Co.'s Yurman 1, 36-33n-6e, sd 3475 ft. Sunburst, Mc-

Cut Out the Time-Wasting Motions of Nut Turning

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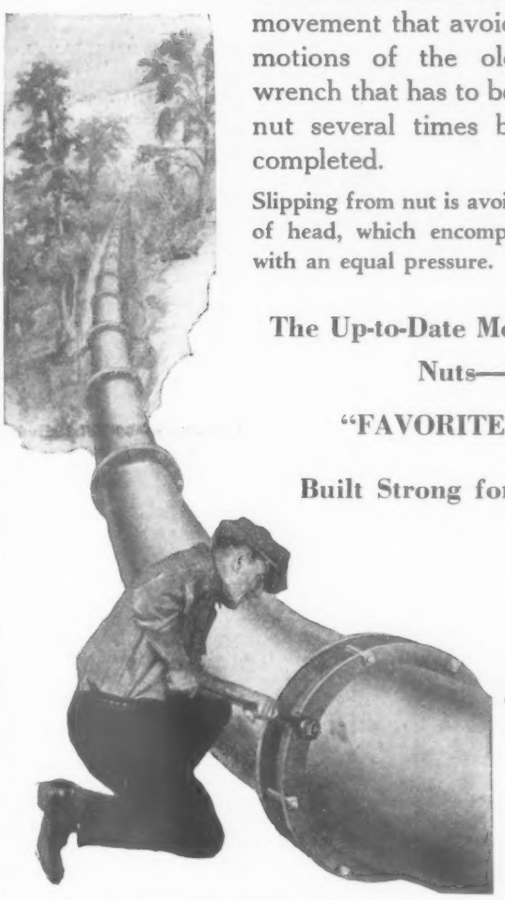
FAVORITE reversible ratchet WRENCH



which turns nuts with the quick ratchet movement that avoids the time-wasting motions of the old style open end wrench that has to be removed from the nut several times before operation is completed.

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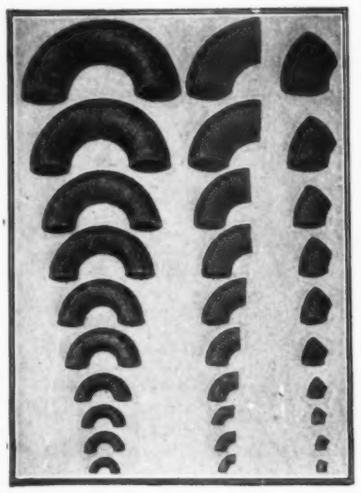

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Laren 1, se 9-37-6e, sd 3115 ft. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, td 3190 ft. Perkins et al's Brown 1, nw 24-35-4e, sd tools in hole. Western Natural Gas Co.'s 1, ne 23-37-4e, try to run cas, td 2065 ft.

POWDER RIVER—Creel et al., 7-8s-50e, set cas 1020 ft.

ROSEBUD—Prairie O. & G. Co.'s 1-X, 26-10-39e, install motor block at 1825 ft. Prairie O&G Co.'s Contract 4, 28-10-38, run 15½-in. at 1120 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand ready to res 150 ft.

TOOLE—Liquid Gold Oil Co.'s Roberts 1, ne 25-36-12, dr 350 ft. "67" Petroleum Co. 1, nw 29-33-1e, dr 200 ft. Internat'l Roy. Hold. Co., Henry 1, sw 26-35-36, dr 2430 ft.

ARKANSAS

Completion

UNION COUNTY—
Malloy & Co., Burns 7, 31-17-15.. 15 2213

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, hole cleaned out, sd for fuel, td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, nw se 4-20-8, 10-inch cas 303 ft, sd 330 ft.

CLEBURNE COUNTY — Donnell et al's Fee 1, 33-11-9, sd wo cas, td 3740 ft (corrected depth).

COLUMBIA COUNTY—J. W. Olvey et al's Kate George 1, nw sw 19-18-20, dr broken lime 3245 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, setting 5 3/16-inch cas on bottom, td 3756 ft.

FRANKLIN COUNTY—Red Bank Oil Co.'s Hamra 1, 33-10-26w, plugging back to 3050 ft, td 3750 ft.

HOT SPRINGS COUNTY—John Watkins, Tr.'s, Cunningham 1, 11-5-16, sd 100 ft. Cleary Bros. et al's Hinson 1, 19-4s-16w, dr 1405 ft.

JOHNSON COUNTY—Ark. La. P. L. Co.'s Kelly 1, sw se 14-10-24, sd 2900 ft; Hudson 1, se se 14-10-24, dr 1562 ft. Blackwell O&G Co.'s Wyver 1, 21-8-23, sd 5600 ft. River Valley Dev. Co.'s Collier 1, se se 21-9n-25w, dr 250 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig up. McIver et al's Hattle 1, nw ne 1-20-26, sd 20 ft.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Buck Oil Co., Taafe 1, 25-12-32, sd 2505 ft.

LOGAN COUNTY—Ark. La. P. L. Co.'s Jno. Pansen 1, ne ne 35-8-24, set 13⅜ cas 343 ft, td 450 ft. M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, ur 5 3/16-inch cas 3570 ft, td 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallem 2, cent sec 17-16-26, sd 405 ft; Hallem 3, ne sw 1-17-26, dr 28 ft.

MILLER COUNTY—E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, 6⅝ cas 2792 ft, short string 4½-inch cas 4 ft sand, td 2951 ft. Lenz et al's Johnson 2, 24-15-26, coring 3200 ft; Johnson 3, ne nw 24-16-26, dr 2100 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, dr 2280 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, sd wo 8-inch cas 900 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-inch cas 85 ft, sd wo. Salzer & McRae's Rose 1, ne nw 9-16-26, 10-inch 98 ft, sd for fuel 475 ft.

OUACHITA COUNTY — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, fsh bit and collar, td 2907 ft. A. B. Turner, Tr.'s, Brown 1, 23-15-18, arr set 6⅝ cas 2164 ft, td 2178 ft. Graves et al's Walker, Tr., 1, sw sw 9-14-18, top Nacatosh 1352 ft, 6⅝ cas 1845 ft, hole cleaned arr deepen, td 1873 ft. Copenhaver et al's Elliott 1, se se 11-15-17, fsh 3 joints ds on bottom, td 1760 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft, dr 1850 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne sw 15-9-21, 13⅜ cas 1900 ft, dr 2443 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sdtr tools at 1436 ft, td 1536 ft. Ark. Valley Gas Co.'s Turner 1, se se 27-5n-30w, lcn.

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, tested sw, sd, td 3515 ft. Lavaca O&G Co.'s Davis 1, nw ne 29-8-30, 8-inch 200 ft, dr 2830 ft; L. Wright 1, 29-8-30, sp dr 450 ft.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft, sd 2750 ft. Marine Oil Co.'s W. B. Thompson A-5, sw ne 10-18-13, dr 3300 ft. Oilfields Corp.'s J. A. Simmons 1, nw nw 13-18-13, tested sw 3556-3602 ft, ta td 3602 ft. Rice et al's Whatley 1, 7-17-15, sd 1520 ft. Malloy & Co.'s Burns 7, nw nw 31-17-15, 8¼-inch cas 2148 ft, pumping 15 bbls oil day, td 2213 ft. J. E. Crosbie, Inc. et al's G. L. Murphy 1, sw nw 13-16-16, coring 2835 ft. H. L. Hunt, Inc.'s Swilley 5, ne ne 28-16-16, 6⅝ cas 2678 ft, 2000 ft oil trace sw in hole, wosr, td 2689 ft; Swilley 6, se se 21-16-16, dr hard lime 2542 ft.

WASHINGTON COUNTY—Taylor et al's Runny 1, 1-13-29, dr 1600 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-21, sd while fsh tools, td 5710 ft.

SOUTHERN CALIFORNIA

ALHAMBRA—Fred Hammer 1, cmt 18-in cas at 565 ft.

BELL—Cudahay Community Oil Ass'n. 1, rigging up.

CORONA—Western Gulf's Abacherli 1, dr hard gray shale 800 ft.

CULVER CITY—Taylor Oil Co. 1, dr 150 ft.

FULLERTON — Standard's Bastanchury 1, dr hard brown shale 7145 ft.

HAWTHORNE—C. L. Wood 1, 10-3-14, new lcn.

HERMOSA BEACH—California-Ventura Oil Co.'s Sadler 1, bailing for test, td 3330 ft; Union Rock 3, rig. Westwood Pet. Co. 1, rig. Geo. Wolfe's Hermosa 1, rigging up rotary.

NEWHALL — Consolidated Oil Co.'s Hammond 1, dr hard sand 2305 ft. Southern California Drilling Co.'s Needham 4, pumping water, td 3505 ft. York and Smullin's Clampitt 5, making production test, td 1280 ft.

NEWPORT—Standard's Irvine 1, dr shale 2900 ft.

PLAYA DEL REY—Olympic Oil and Realty Co. 1, 14-2-15, dr shale 4760 ft West Port Oil Co. 1, dr shale 5162 ft.

POMONA—Lamona Oil Assn.'s San Jose 2, rigging rotary.

PUENTE—Bardeen Oil Co.'s Barnadette 1, 2-2-10, dr 680 ft. Rio Hondo Pet. Co.'s Rowland 1, 14-2-10, pumping 50 bbls oil, td 3725 ft. C. F. Shannon 1, 3-2-10, swabbing at 4620 ft. Vega Pet. Corp.'s Rowland 1, rig. El Dorado Oil Co.'s Baird 1, co 1085 ft.

SAN FERNANDO—Shell's Andrews 1-1, sr 5600 ft.

SANTA FE SPRINGS—Union's Orchardale 1-1, dr shale 5935 ft.

SAN JUAN CAPISTRANO—Okay No. 2's Foster 2, dr hard gray sand 4875 ft.

WILMINGTON—Wilmington Cons. Oil Co. 1, new lcn.

NORTHERN CALIFORNIA

Completion

TULARE COUNTY—
Terre Bella Drilling Co.'s Rusling 1, 34-22-27 . ..... * 925

KERN COUNTY

BELRIDGE — Associated 1, 21-27-20, lcn. Belridge Oil Co. 8, 27-27-20, rig; 48, 35-27-20, lcn. General Pet.'s Bery 1, 30-28-21, dr shale 3575 ft. Ohio's Bloemer 1, 36-27-20, dr shale 2313 ft. Reward Oil Co.'s Associated 4, 34-27-20, dr shale 1200 ft. Richfield's Belridge 1, 22-27-20, sr to cmt cas, td 5805 ft. Standard's McPhail 1, dr 700 ft; McPhail 2, 36-27-20, lcn. Texas' Martin 1, 22-27-20, dr shale 1900 ft. Union's Bacon 1, 27-28-20, lcn; Belridge 17, 36-27-20, rigging up. K. C. Wallace 1, 32-29-21, dr shale 3866 ft.

BUENA VISTA—Federal Drilling Co. 1, 20-31-24, dr shale 4700 ft. Midland Exploration Co. 1, 34-31-24, lcn.

BUTTONWILLOW — Nordon Oil Corp.'s Salisbury 1, 7-29-24, dr shale 5528 ft. Superior's KCL-1, 32-29-25, rigging up rotary.

DEVIL'S DEN—Standard's Alferitz 1, 14-25-18, dr shale 1444 ft.

EDISON—Petroleum Securities Co.'s Johnson-Moss 1, 14-29-28, dr gray sand 3628 ft.

EL TEJON—J. J. Ritchie 1, 33-11-19, deepening from 4870 ft.

McKITTRICK — California Oil Producers' Wisecarver 1, 30-30-22, sdtr whipstock 5050 ft, will re-drill.

PATTIWAY—H. A. Bardeen's Ramsey 1, 10-10-23, dr shale 4328 ft.

SEMITROPIC—Shell's Williams 1, 17-27-23, coring 8158 ft.

WASCO—Cities Service Pet. Co.'s Core Hole 1, 16-28-24, new lcn.

WEED PATCH—Mohawk Oil Co.'s Wharton 1, 32-20-29, dr hard sand 4340 ft. Shell's Porter-Day 1, 29-30-29, will deepen from 5962 ft; well flowed 1100 bbls 23 gravity oil, opening up new field; Porter 1, 29-30-29, dr shale 3230 ft.

SANTA BARBARA COUNTY

CAMPBELL'S POINT — Bolsa Chica Oil Corp.'s Augur 191-1, dr shale 3700 ft.

GATO RIDGE—Barnsdalls Tegnazzini 1, 9-8-32, dr shale and sand 5550 ft.

GOLETA—General Pet.'s More 3, dr shale 3100 ft. George W. Johnson's Duncan 1, dr hard sand 4060 ft.

LOS ALAMOS—N. S. Wilson's Midwest 1, dr shale 1700 ft.

NAPLES—J. H. Cochrans 1, 7-4-29, dr gray sand 4620 ft.

ORELLA—General Pet.s Erburu 8, dr shale 3366 ft.

POINT CONCEPCION—Standard's Gerber 1, sr 5400 ft, td 6712 ft.

PURISIMA — Vaqueros-Major Oil Co.'s Union Annex 1, 6-7-33, lcn.

SANTA MARIA—O. C. Field Gasoline Co.'s Bradley 1, 8-9-33, will deepen from 5267 ft. Western Gulf's Bradley 1, 5-9-33, dr oil sand 4880 ft, will cmt 9-in cas for test.

VENTURA COUNTY

HOOPER CANYON—George H. Hadley 1, 13-4-9, showing oil, td 940 ft.

LOCKWOOD VALLEY—Lockwood Valley Oil Co. 1, 32-8-21, dr shale 200 ft.

OJAI — Knudsen & Schmidt 1, 12-4-23, dr 125 ft.

RINCON — Chanslor Canfield Midway Oil Co.'s Hobson A-2, 23-3-24, m 7521 ft.

SANTA MONICA MOUNTAINS—Olympic Corp. 1, 18-1-17, fsh for drill pipe, td 5670 ft.

SANTA PAULA — George C. Thompson 1, 15-4-21, dr gray sand 2515 ft.

SESPE—Merchants Pet. Co.'s Cochran 1, 1-4-20, rigged to sp. Superior's Kirtlan 1, dr hard shale 2915 ft.

SOUTH MOUNTAIN — Rig Pet. Corp.'s Converse 1, will deepen from 4910 ft.

VENTURA—Prairie Oil & Gas Co.'s Sexton 1, 30-3-22, 9-in cas cmt 7327 ft, td 7520 ft.

MISCELLANEOUS

FRESNO COUNTY—Associated's Jacalitos 1, dr shale 3000 ft. Hornaday & Huggins 1, 32-14-18, fsh 5050 ft.

KINGS COUNTY—L. W. Seymour 1, 10-23-16, fsj 900 ft. T. H. Purman's Avenal 1, rigging up. Murphy Oil Co.'s Brennan 1, 20-23-20, dr shale 1510 ft.

MENDOCINO COUNTY — Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 5166 ft.

MONTEREY COUNTY — F. A. Brown's Taylor 1, 15-23-14, dr shale 808 ft. Pacific Inland Oil Co. 1A, 19-23-15, dr hard sand 900 ft. Standard's Piedmont 1, 23-22-7, dr hard sand 5750 ft.

SAN LUIS OBISPO COUNTY — C. J. Schilling's Potter 1, 1-29-12, cmt 12¼-in cas 855 ft. Paso Robles Synd.'s Emerick 1, 34-27-11, co 3910 ft. Miracle Oil Co. 1, 17-10-25, rigging up rotary. C. Shockley's Carpenter 1, 13-32-13, dr gray sand 850 ft. Continental's Hellman 1, 26-25-11, dr shale 1728 ft. Latin-American Pet. Co.'s Whitley 1, 31-27-15, swabbed water, sd 4505 ft.

TULARE COUNTY—Big Four Drilling Co. 1, 29-23-27, pulling 6¼-in cas, td 4330 ft. Ducor Drilling Co.'s Zimmerman 1, 14-24-27, sdtr iron 2200 ft. Enterprise Oil Co.'s Dennis 1, 29-23-28, fsh for drill pipe 701 ft. Larson Oil Co.'s Best 1, 11-23-27, dr shale 1212 ft. Roetner Oil Co. 1, 34-22-27, re-dr 1100 ft. Western Oil & Exploration Co.'s Gardiner 1, 35-22-27, pulled oil string, td 1020 ft. Inland Valley Oil Co.'s Smith-Rea 1, 24-17-24, sr 2075 ft.

YOLO COUNTY—George F. Getty's Guinda 1, 23-12-3, sd 2007 ft.

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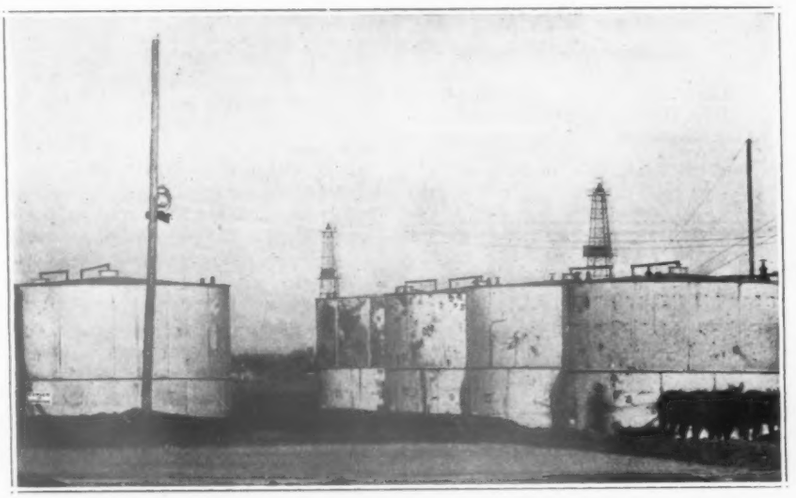

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LETTERS

Gentlemen:

I have just read your report in THE OIL WEEKLY of November 21, 1930, covering the hearing held by the Hon. R. D. Parker, Chief Supervisor of the Oil and Gas Division of the Railroad Commission of Texas, at Fort Worth, November 13. Your allusions to my trick questions has taken on a rather humorous aspect with my friends in the profession, because they have long since concluded that I would not know a trick question if I met one coming down the middle of the road.

Your report of the meeting was substantially accurate and substantially fair, with one exception. Any interested reader in scanning your report might easily draw the conclusion that the Phillips Petroleum Company is against the curtailment of production by proration methods. Our principal complaint with respect to the hearing of November 13 was that the evidence introduced by the proration committee was obviously designed to have such evidence serve as the basis of a proration order that would require Panhandle producers to always curtail production to meet market demands. My only effort on cross examination was to show that the market demand for Panhandle oil could not possibly have any functional relation to the production of oil in the Panhandle in so far as the application of correct enginering principles were involved and that if curtailing production to meet the market demand resulted in the solution of the problem by the application of correct engineering principles, the result would be sheer accident.

Very truly yours,

DON EMERY

Amarillo, Texas.

Let this trick answer prove to Mr. Emery's professional friends that their estimate of his abilities at trick questions is far from accurate. We do not yet fully understand, we must confess, just what Phillips Petroleum Company wants in this mixture of economics, technology and technicality, but our reporter in the first instance imputed no more than that the company sought that proration rules might be so drawn as to least affect its own operations (which must be conceded its right) and otherwise, why counsel?—EDITOR.

Dear Sir:

I wish to state that the largest oil well in the world was the Cerro Azul No. 4. I notice in the "Letters" section of THE OIL WEEKLY where you state the Mexican Eagle Oil Company's Protrero El Llana 4, was largest.

The Cerro Azul No. 4, in Mexico, near Tampico, was drilled in February 9, 1916, with a daily production of 260,858 barrels. This gusher threw a column of oil 598 feet, and is known as the greatest oil well. I think if you will look this up you will find it to be true.

FLOYD P. BENSON,
Geologist.

5486 University Avenue,
Chicago, Illinois.

Initially Cerro Azul No. 4, with 260,000 barrels daily, was larger than Protrero El Llana 4, which had something more than 100,000 barrels initial, ultimately the total production from the latter mentioned, completed six years earlier, has been greater, according to our sources of information. In 1916 and a few years after, big wells were measured by estimates of their initial flow; more recently ultimate recovery has been the basis of measure. Either of these wells was largest according to the stick applied.—EDITOR.

Frank Parker, associated with the iron and steel industry for the past 25 years, recently resigned as vice-president and general manager of Briggs & Turivas, Inc., Chicago, to organize the Iron & Steel Products, Inc., 653-55 Railway Exchange, Chicago. He had been associated with Briggs & Turivas, Inc., since 1916, prior to which he had spent 11 years with Republic Iron & Steel Company, now Republic Steel Corporation.

FRANK PARKER

Parker is president of the Chicago chapter of the Institute of Scrap Iron & Steel, Inc. He is also vice-president of the national association. He spent eight years of special study at the Armour Institute of Technology.

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Texas Quarterly Production Report
Third Quarter, 1930

Leading Producing Companies of Texas, Third Quarter, 1930

	Third Quarter 1930	Second Quarter 1930	First Quarter 1930	Fourth Quarter 1929	Third Quarter 1929	Second Quarter 1929
Humble Oil & Refining Company	7,519,384	7,622,276	7,359,231	7,647,340	7,775,323	6,323,670
Gulf Production Company	7,377,163	7,345,267	6,852,880	7,384,799	8,082,210	7,594,007
The Texas Company	4,433,591	4,361,235	4,304,651	4,883,816	4,906,652	4,047,495
Shell Petroleum Corporation	4,019,486	4,166,995	2,137,007	2,501,841	2,998,937	3,345,651
Mid-Kansas Oil & Gas Company	3,218,001	4,851,448	2,831,354	.....	.....	.....
Magnolia Petroleum Company	2,843,473	3,137,380	2,851,905	2,340,306	2,490,996	2,568,770
Pure Oil Company	2,260,006	2,000,960	1,191,645	.....	.....	.....
Continental Oil Company	2,180,484	1,922,285	.....	.....	.....	.....
Southern Crude Oil Purchasing Co.	2,166,306	2,450,790	2,842,112	3,178,536	4,124,464	3,811,091
Phillips Petroleum Company	2,115,172	2,533,680	2,097,349	.....	.....	.....

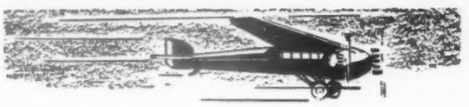
Total of 10 leading producing companies in Texas for third quarter, 1930 ..... 38,133,066 Barrels
Evaluation of same $40,141,121
Total production of all Texas producing companies for same period ..... 77,506,340 Barrels
Evaluation of same $82,811,993

GROSS RECEIPTS REPORTED FROM CRUDE OIL PRODUCTION FOR THE QUARTER ENDING SEPTEMBER 30, 1930

Name and Address	Barrels	Value
Adams, McGahey & Osborne, Amarillo	11,508	15,025
Adams & Prince, Amarillo	15,403	19,385
Ailes, J. W., Wichita Falls	742	769
All-American Oil & Gas Co., Oklahoma City, Okla.	1,768	2,312
Antelope Creek Oil & Gas Co., Amarillo	4,235	3,261
Andrews Petroleum Corporation, New York, N. Y.	4,080	3,822
Atkinson & Sandefer Oil Corp., Breckenridge	8,610	11,279
American Refining Properties, Wichita Falls	51,340	54,772
Abbott, R. W., Beaumont	911	1,047
Allaun, William E., Atlantic Keystone Petroleum Co., Fort Worth, Bolivian Petroleum Co.	1,181	1,008
Alamosa Oil Company, Amarillo	5,536	4,498
Ada Belle Oil Co., Batson	22,769	26,184
Arkansas Fuel Oil Co., Shreveport, La.	123,194	175,658
All-American Oil & Gas Co., Oklahoma City, Okla.	1,995	2,571
Apple-Brandeberry Oil Co. (6-30-31), Wichita Falls	10,133	13,479
Atlas Production Co. (6-30-31), Burkburnett	1,201	1,429
Art and Taxman, Wichita Falls	1,196	1,609
Allbritain, F. J., Markley	942	1,282
Arnold, J. L., et al, Eastland	696	769
Arab Gasoline Corporation, Eastland	847	1,105
Ashe Syndicate, Fort Worth	782	1,064
Acorn Oil Company, Beaumont	7,645	8,791
Allied Oil & Gas Company, Laredo	99,483	84,561
American Maracaibo Company, New York, N. Y.	87,829	73,528
Andrews, W. R., et al, Breckenridge	846	1,114
Allday Oil Corporation, Wichita Falls	467	453
Ama-Gray Oil Company, Amarillo	4,334	5,439
Alaska Petroleum Co., Amarillo	1,125	1,233
Arrow Head Oil Co., Dallas	1,458	1,961
Atlas Production Co., Burkburnett	1,039	1,039
Abercrombie, J. S. Company, Houston	198,553	226,830
Abraham, Earl, Bridgetown	1,182	1,416
American Refining Properties (NBC), Wichita Falls	1,142	1,576
Artex Oil Company, Wichita Falls	1,081	1,455
Atlantic Oil Producing Company, Dallas	849,149	850,742
Adamson, Peter, Jr., Tulsa, Oklahoma	241	377
A. & P. Production Company, Houston	57,960	64,524
Alamo Oil Company, Brownwood	420	531
Arcadia Refining Company, Coleman	16,949	22,480
American Refining Properties (WMP), Wichita Falls	6,414	7,947
Ascot Company, Wichita Falls	934	1,113
Amarillo Oil Company, Amarillo	1,424	1,296
Aarco Oil & Gas Company, Baltimore, Md.	8,042	11,393
American Petroleum Corporation, Tulsa, Okla.	291,683	273,713
Adams and Lyles, Lockhart	6,571	7,556
Amicable Life Insurance Company, Waco	600	600
Adams & Lyles, Lockhart	2,147	2,845
Ames, E. W., et al, San Antonio	183	255
Atlas Oil Corporation, Humble	1,570	1,805
Arco Oil Company, Wichita Falls	31,428	29,446
Adams, Dr. Walter B., Wichita Falls	460	629
Anderson-Kilgore-Simmons, Fort Worth	22,603	17,020
Anderson Properties-Simmons A Lease, Fort Worth	15,093	11,416
Anderson Williamson Co., Prop., Fort Worth	245,339	177,939
Anderson, C. N., Tr., Des Moines, Iowa	1,248	1,705
Anderson, J. T. Cisco	2,440	3,345
Alworth-Stevens-Hild Co., New York, N. Y.	1,262	1,073
Bradstreet, The L. G. Company, Fort Worth	49,538	66,984
Blue Bonnet Petroleum Corp., San Antonio	671	728
Brownlee-Pope Oil Co., Austin	1,799	2,352
Beams, Drew, Okmulgee, Okla.	1,719	2,277
Briggs, R. E., et al., (3-31-30), Corsicana	38	48
Burk Burnett Jr. Oil Co., Fort Worth	451	615
Briggs, R. E., et al, (6-30-30), Corsicana	54	68
Butler & McAlister (Townsite Oil Co.), Olney, (3-31-30)	187	267
Butler & McAlister (Townsite Oil Co.), Olney (6-30-30)	314	449
Braden Company, The, Tulsa, Okla.	3,426	4,458
Brown, Mrs. Carrie L., et al, Orange	13,019	14,972
Brown, Dr. E. W. Estate, Orange	584	672
Borealis Oil Company, Oklahoma City, Okla.	3,551	4,854
Baker, J. F. & H. E., Breckenridge	2,635	3,451
Baker, J. A. & Mollie B., Breckenridge	6,045	7,869
Baker, Mollie B. & Fred R., Breckenridge	702	940
Bowman Oil Company, Rockdale	468	631
Birk, C. E. & C. L. Kelly, Iowa Park	125	168
Birk, C. E. & C. L. Kelley, Iowa Park, (December 31, 1929, March 31, 1930, June 30, 1930)	385	535
Black, W. A., Midland	1,038	1,162
Baker & Pardue, Breckenridge	10,426	13,907
Bass & Dillard, Wichita Falls	2,292	3,177
Bynum & Palmer, Rockdale	160	213
Bourbon Royalty Company, Dallas	2,074	2,404
Bourbon Royalty Company, Dallas	1,042	1,680
Bolin, D. H. & R. W. Lindsay, Graham	526	711
Butler & Perkins, Olney	159	205
Bruce, A. D., Brownwood	331	404
Badger Oil Co., Amarillo	13,322	16,924
Burton McKee Oil Corp., Strawn	509	674
Britton & Gordon, Strawn	608	864
Britton, Ed. S., Tr., Wilbar Lease, Strawn	2,773	3,802

Name and Address	Barrels	Value
Burns, L. T., Wichita Falls	81,831	114,760
Bynum, W. W. Estate, Rockdale	782	1,023
Beggs, Geo., Strip, Fort Worth	1,458	2,384
Brownwood Producing & Refining Co., Brownwood.	1,299	1,695
Baker, James Blair, Jr. & C. F. Camp Tr "B" Lease, Wichita Falls	17,728	22,881
Baker, James Blair, Jr. & C. F. Camp Tr. Wichita Falls	2,155	2,780
Barber Oil Company, Chicago, Ill.	2,652	4,011
Bartlett Production Co., Rockdale	590	773
Biel, Wm. A., Von Ormy	40	46
Bona, Joseph E., Denver, Colo.	6,652	7,244
Bohner, C. J. Oil Corp., Burkburnett	18,213	24,731
Bohner, C. J., et al, Burkburnett	6,486	8,463
Bohner, Crenshaw & Whitehill, Burkburnett	6,902	8,996
Baldwin, F. C., et al, Fort Worth	1,325	1,921
Big State Oil Corp., Houston	1,804	2,363
Bashara, J. F., Houston	18,157	22,707
Boardman & Ulrich, Corsicana	1,849	2,496
Bullington-Clark et al, Wichita Falls	5,024	4,339
Bailey, Mrs. Fannie W., Wichita Falls	1,182	1,633
Bevering, A. H., et al, Henrietta	1,174	1,526
Boller, C. W., Wichita Falls	25,107	35,063
Brown, H. L., Fort Worth	11,811	13,583
Bonner Company, Wichita Falls	17,850	24,493
Bailey, Carl B., Wichita Falls	7,317	9,843
Bluebonnet Oil Company, Wichita Falls	703	934
Biggs Oil & Gas Co., McKinney	885	1,289
Buttram, Frank, Oklahoma City, Okla.	646	909
Brown, A. J., Fort Worth	1,589	1,339
Bradstreet, L. G. Company, Fort Worth	40,000	53,899
Buchanan, A. A., San Antonio	36,743	45,159
Biles, George J., (Marquette Oil Co.), Tulsa, Okla.	4,590	5,273
Brown Farm Oil Company, Wichita Falls	1,668	2,364
Burke-Greis Oil Co., Tulsa, Okla.	1,610	2,307
Baxata Oil Co., San Antonio	1,062	1,183
Barkley, Gholson et al, Ranger	94	115
Barkley & Crotty (6-30-30), Ranger	4,125	5,481
Barkley & Crotty (3-31-30), Ranger	4,627	5,973
Barkley & Crotty (12-31-29), Ranger	4,429	6,664
Barkley & Crotty, Ranger	3,654	4,858
Barkley & Conway, Ranger	4,810	7,339
Baker, James Blair, Jr. "A" Lease, Wichita Falls	406	406
Baker, James Blair, Jr. et al "B" Ls, Wichita Falls.	788	788
Bashara, M. J. & Sons, Wichita Falls	2,179	2,151
Benedum-Trees Oil Co., Pittsburgh, Pa.	10,518	8,774
Brazelton Brothers & Williams, Olney	4,981	6,939
Brooks & Hanlon, Inc., Tulsa, Okla.	564	672
Burkburnett Production Oil Trust, Baltimore, Md.	1,113	1,512
Bridwell Oil Company, Wichita Falls	147,109	174,567
Bridwell & Haydrick, Tr., Wichita Falls	1,320	1,888
Bridwell & Mayfield, Wichita Falls	7,534	5,170
British American Oil Producing Co., Tulsa, Okla.	4,712	6,654
Breeding & Hutson, Rising Star	351	535
Big Lake Oil Co., Pittsburgh, Pa.	1,186,086	1,590,843
Barnsdall Oil Co., Tulsa, Okla.	81,309	97,520
Buttram Petroleum Corp., Oklahoma City, Okla.	29,244	43,640
Butler, J. A., Albany	148	181
Bezold & Young, Sheridan, Wyoming	3,195	4,128
Bohner, C. F., Kansas City, Kans.	60	75
Barnes, J. B., Electra	11,151	12,312
Barnsley, Foster, Laredo	7,924	6,728
Big Gray Oil & Gas Co., Amarillo	28,927	36,753
Bell Oil & Gas Co., Tulsa, Okla.	2,124	1,701
Black Diamond Oil Co., Amarillo	None	
Brazos River Gas Co., Wichita Falls	.....	422
Bolin, D. H., Tr., Graham	10,503	13,943
Byrd, W. E., Hull	1,021	1,174
Brady Brothers, Minerva	792	1,036
Brannon & Murray, Cisco	2,498	3,485
Booth, C. H. & A. T. Priesmeyer, Tr., Taylor	30,193	22,662
Black Cat Oil Co., Electra	847	1,152
British American Oil & Gas Co., Tulsa, Okla.	13,034	16,843
Brown & Lickey, Wichita Falls	861	1,138
Brown & Guinn, Wichita Falls	190	280
Brazos River Gas Co., Wichita Falls	105	164
Baird Oil Co., Putnam	134	177
Bowers Oil Co., Vernon	1,150	1,524
Carey, C. W., Wichita Falls	6,106	8,305
Continental Oil Co., Ponca City, Okla.	2,180,484	2,211,590
Cromwell, Carl G., (6-30-30), San Angelo	7,055	7,265
Cal. Cex. Oil Co., (6-30-30), Somerset	259	264
Chapman, J. O., (Chapman Estate), Waxahachie (6-30-30)	23,838	30,687
Castlebury, S. A., (6-30-30), Vernon	318	401
Cole Petroleum Co., (6-30-30), Laredo	16,931	14,391
Cole Petroleum Co., (3-31-30), Laredo	18,401	13,896
Cole Petroleum Co., (12-31-29), Laredo	21,920	19,728
Cole Petroleum Co., Laredo	27,216	24,494
Collier, J. W. & Mabel, (3-31-30), Tipton, Okla.	79	107
Cezeaux & Martin, (3-31-30), Humble	3,359	3,906
Cezeaux & Martin, (12-31-29), Humble	4,233	4,771
Cezeaux & Martin, (6-30-30), Humble	5,336	6,463
Cezeaux & Martin, Humble	9,374	10,945
Cranfill Brothers Oil Co. et al, Dallas	27,657	21,271
Coble-Whittenburg Oil Co., Amarillo	200	155
Curry, E. M., Pioneer	1,333	1,960
Cunningham Production Co., (10-1-29 to 6-30-30) Houston	10,043	11,287
Central Texas Refining Co., R. L. Wheelock, Recv, Corsicana	9,976	11,920
Crabb & McNeel, San Angelo	3,053	3,375
Cashdollar & Snyder, Brownwood	162	185
Cushing Refining & Gasoline Co., Cushing, Okla.	12,026	9,793
Clark-Buffalo Oil Corp., Buffalo, N. Y.	687	880
Callihan, Geo. & Carter Development Co., Albany.	2,490	3,168
Goffield & Hale Oil Co., Rockdale	1,589	2,028
Comet Petroleum Co., Fort Worth	2,565	2,097
Craig & Lowrie, Pittsburgh, Pa.	1,199	1,282
Clarkson, William, Jr., Houston	4,764	6,477
California Company, The, Dallas	1,497,217	1,227,526
Clearlake Oil Co., Rockdale	728	954
Clark, R. R. et al, Wichita Falls	33,336	45,043
Clayton Key Oil & Gas Co., Amarillo	7,732	9,250
Christie Bros., Wichita Falls	43,459	60,226
Canyon Oil & Gas Co., Inc., Cross Plains	803	1,097
Cable Oil Co., Wichita Falls	4,331	5,857
Camp Oil & Gas Co., Wichita Falls	626	839
Campbell, Alma, Fort Worth	903	1,223
Cox, Edwin B., Ardmore, Okla.	1,477	1,858
Clem Oil Co., Houston	440	374
Cady, C. C., Moran	296	317
Collins, J. L. & Co., Corsicana	43,474	33,581
Connell-Wixson-Frazier, El Dorado, Kans.	932	1,077
Carlin & Tobin, Ranger	387	510
Capitol Oil Co., Orange	972	1,117
Cullen, H. R., et al, Houston	8,076	8,561
Cullen & West Production Co., Houston	4,172	5,132
Cornhusker Oil Co., Laredo	1,529	1,300
Coline Oil Corp., Oklahoma City, Okla.	4,151	5,787
Chalk, Otis, Big Spring	5,157	4,053
Cuno, Mrs. Bertha, et al, Moran	1,674	2,168
Chenault, W. L., Amarillo	529	755
Caruthers Company, San Antonio	1,259	1,330
Cosden, J. S., Inc., Fort Worth	6,692	8,755
Corvette Oil Corp., Fort Worth	5,833	3,732
C. R. & M. Drilling Co., San Antonio	19,907	22,893
Coppock & Coleman, Iowa Park	13,491	19,517
Cardinal Oil Co., San Angelo	55,628	27,814
Culbertson Company, Wichita Falls	7,977	10,897
Cisco Oil Co., Tulsa, Okla.	19,227	23,278
Conway Bros., Ranger	3,397	4,738
Conway Bros. & Champion, Ranger	338	396
Charter Oil Co., Brownwood	6,062	8,044
Champlin Refining Co., Enid, Okla.	159,500	183,901
Clark, R. R., Wichita Falls	11,050	15,320
Crosbie, J. E., Inc., Tulsa, Okla.	3,167	2,454
Cullum, F. P., Wichita Falls	11,986	16,282
Crown Oil & Refining Company, Houston	17,952	20,645
Cosa Oil Co., San Antonio	225	330
Cromwell, Carl G., San Angelo	3,091	3,183
Cromwell, Carl G., San Angelo	8,237	6,627
Church & Weekley, Fort Worth	57,387	47,941
Clay, J. D., Houston	3,316	3,608
Chestnut & Smith Corp., Tulsa, Okla.	12,776	17,568
Cal. Tex. Oil Co., Somerset	284	289
Cole, W. C., Wichita Falls	1,032	1,424
Campbell, Walter K. Company, Wichita Falls	764	1,042
Clark, C. W., Wichita Falls	6,955	9,540
Consolidated Oil Co. of Texas, Wichita Falls	110,688	143,412
Crown Central Petroleum Corp., Houston	42,265	35,925
Cohen, Aaron, Baltimore, Md.	6,408	9,443
Cranfill Brothers Oil Co., Wichita Falls	6,457	9,133
Corpus Christi Oil Co., Corpus Christi	392	333
Chapman, P. A. Estate, Waxahachie	11,267	14,533
Central Oil Co., Cameron	3,181	4,064
Carter, Roy I., Wichita Falls	21,170	16,307
Cockrell-McIlroy Oil Co., Amarillo	107,129	114,126
Center Field Oil Co., Amarillo	354	275
Cole Petroleum Co., Laredo	15,606	13,264
Conner Son & Cloughley (6-30-30), Gotebo, Okla.	11,972	16,586
Conner Son & Cloughley, Gotebo, Okla.	12,233	16,133
Cunningham, J. C., Graham	2,326	2,326
Cunningham & Lynch, Graham	10,913	15,123
Chapman, E. L., et al, Fort Worth	63,643	42,393
Campbell, R. S., Humble	645	684
Carey, E. S. et al, Wichita Falls	648	827
Cranfill-Reynolds Co., Houston	576,337	636,669
Deaner, J. J., Laredo	79	79
Deutser, B., Tr., Beaumont	1,185	1,363
Developers Oil & Gas Co., Wichita Falls	521	745
Developers Oil & Gas Co., (6-30-30), Wichita Falls.	536	761
Darby Petroleum Corp., Tulsa, Okla.	16,523	23,925
Dalton Bell Oil Co., (March & June Qts.), Mineral Wells	882	1,234
Davis Oil Corp., Vernon	40,291	52,630
Dale, Jack B., Wichita Falls	2,792	3,945
Dale & Crawford, Electra	696	970
Dudley, G. S., Iowa Park	1,631	2,175
Dale-Knotts Oil Co., Wichita Falls	245	354
Derby-Haines-Williams, Wichita, Kans.	786	608
Derby Oil Co., Wichita, Kans.	2,494	2,747
Derby & Haines, Wichita, Kans.	4,105	4,181
Derby Oil Co., Wichita, Kans.	8,820	11,321
Douglas Oil Co., Tulsa, Okla.	6,471	8,651

"WINGS"



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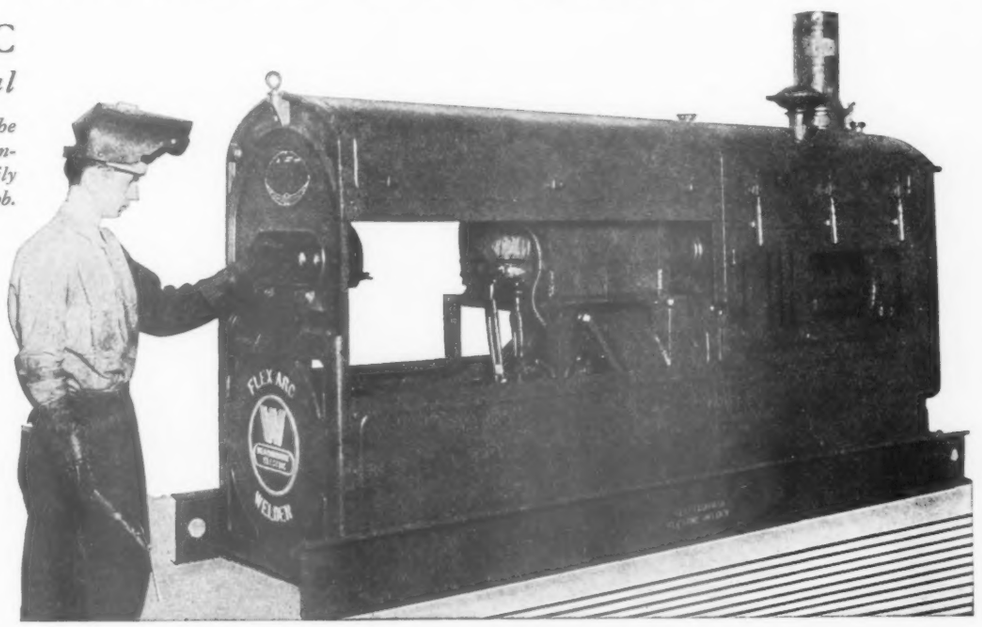


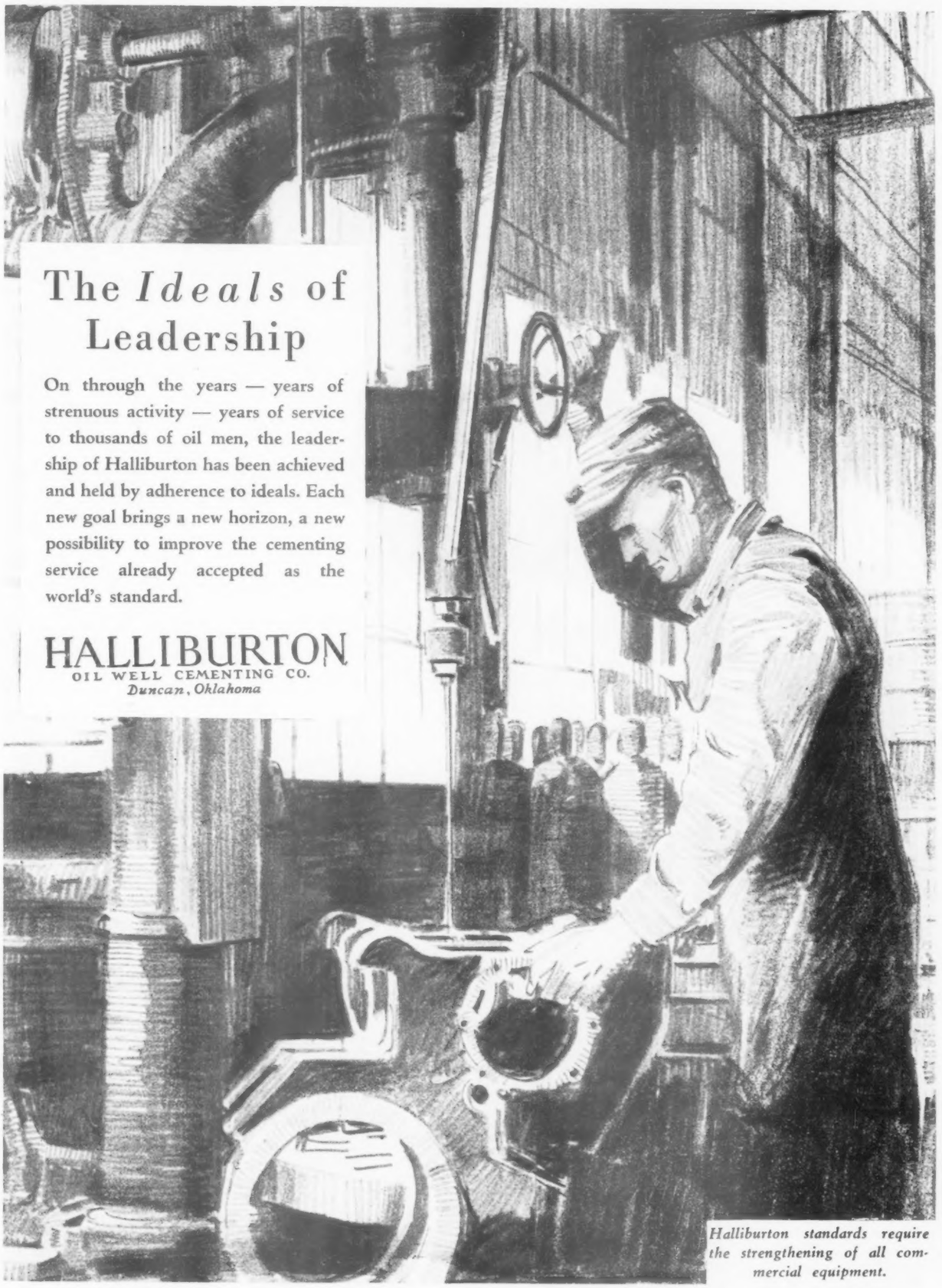
Service, prompt and efficient, by a coast-to-coast chain of well-equipped shops

Westinghouse

T 31610

TUNE IN THE WESTINGHOUSE SALUTE OVER THE N. B. C. NATION-WIDE NETWORK EVERY TUESDAY EVENING.

Name and Address	Barrels	Value
Dunaway, J. E., et al, Wichita Falls	3,133	3,524
Dunaway, J. E., Wichita Falls	1,039	1,408
Dunigan Brothers, Breckenridge	1,905	2,142
Decatur Oil Co., (6-30-30), Wichita Falls	6,751	7,311
Decatur Oil Co., (3-31-30), Wichita Falls	3,086	3,125
Daniel Drilling Co., Wichita Falls	4,094	5,995
Deep Rock Oil Company, Fort Worth	5,101	3,365
Davis, Louise Reyman, Tulsa, Okla.	1	1
Davis, Beatrice H., Tulsa, Okla.	1	1
Dennis, J. S., Moran	2,229	2,708
Dominion Oil Co., Tulsa, Okla.	516	682
Darby Petroleum Corp. & C. C. Julian Oil & Royalties Co., Oklahoma City, Okla.	8,671	12,378
Dixie Oil Co., Inc., Tulsa, Okla.	103,804	77,594
Duffield & Howard Oil Co., Tulsa, Okla.	720	848
Danciger Oil & Refining Co. of Texas, Fort Worth.	449,301	509,913
Deaner, J. J., Okmulgee, Okla.	476	317
Douglas Brothers & Johns, Electra	500	709
Douglas Brothers Oil Co., Electra	1,803	2,579
Douglas Production Co., Electra	1,463	1,990
DeMont, I. N., Cross Cutt—Moran	56	62
Dunigan Brothers, Pampa	977	1,014
Dean Oil Company, Burkburnett	397	507
Den Wich Oil Co., Abilene	780	1,088
Dalton, Jack Oil Co., Fort Worth	993	1,367
Devonian Oil Co., Tulsa, Okla.	26,508	30,990
Duquesne Oil Corp., Eastland	60	78
Deering, John A., Houston	54,937	67,304
Delmar Oil Co., Bartlesville, Okla.	44,979	50,929
Dixon Creek Oil Co., Amarillo	96,688	97,070
Dye & Gillette, Tulsa, Okla.	7,554	9,160
Dunlop & Dawson, (6-30-30), Ponca City, Okla.	16,511	22,002
Dunlop & Dawson, Ponca City, Okla.	17,414	23,519
De Rosa Oil & Gas Co., Amarillo	36,434	47,388
Duho Oil Company, Houston	1,606	1,917
Dittman & Black, (6-30-30), Fort Stockton	6,497	5,499
Eckert, F. H., (3-31-30), San Antonio	2,089	2,426
Eckert & Son, (3-31-30), San Antonio	784	906
Eckert, F. H., (6-30-30), San Antonio	2,183	2,649
Eckert & Son, (6-30-30), San Antonio	2,160	2,628
Empress Oil & Gas Corp, (6-30-30), Coleman	319	326
Elrod, Beaubot & Sullivan, (6-30-30), San Angelo	2,028	2,700
Eurner Oil Corp., Abilene	4,767	5,571
Edwards, R. J., (6-30-30), Oklahoma City, Okla.	217	292
Edwards, R. J., (3-31-30), Oklahoma City, Okla.	256	359
Edwards, R. J., (12-31-29), Oklahoma City, Okla.	221	344
Ellis & Anderson, (6-30-30), San Antonio	84	94
Ellis & DuBose, (6-30-30), Fort Worth	1,698	1,984
Elsik & Pamykal, Jr., Brenham	1,954	1,098
Electra Production Co., Inc., Electra	473	647
Eubank, R. O. & B. K., Cross Plains	2,003	2,794
Edmondson, J. M., San Antonio	1,076	1,201
Empire Gas & Fuel Co., Maine, Bartlesville, Okla.	651,667	736,071
Ellis & Lancaster, Beaumont	205	236
East Batson Oil Co., Batson	13,949	16,042
Ernest Oil Co., Rockdale	189	248
Edgington & Niles, Laredo	48,620	41,327
Erie Investments Limited of Texas, Toronto, Canada	398	494
Eddy Oil Co., Beaumont	1,101	1,267
Ellis & Anderson, San Antonio	70	75
Eastland Oil Co., Fort Worth	85,035	91,213
Eddleman & Payne, Inc., Wichita Falls	4,002	5,618
Engel, E. A., Albany	4,185	5,803
Easton, E. S., Wichita	878	1,226
Emerald Oil Company of Texas, Winfield, Kans.	2,108	1,402
Erlewine, A. J., et al, Wilson, Okla.	1,510	1,938
Eppenauer, E. L., Tr., Fort Worth	1,297	1,747
El Rio Oil Company, Amarillo	174	153
Easter Oil Corporation, Wichita Falls	42,941	56,384
Fuchs, Fritz, (6-30-30), Taylor	225	270
Fulton, Tom, (6-30-30), Wichita Falls	2,019	2,872
Ferguson, W. R., (6-30-30), Wichita Falls	586	817
F. H. E. Oil Co., (6-30-30), Sherman	17,256	21,826
Fleming & Kimbell, (6-30-30), Sherman	4,695	3,990
Farmers State Bank, Burkburnett	505	635
Fox, Perry I. and Wm. R. Thorsen, Mertzon	1,512	1,527
Falls Production Co., Wichita Falls	2,937	4,080
Farish & Ireland Lease, Houston	6,461	7,431
French Oil Corp., San Antonio	20,789	17,671
Fox & Adams, Burkett	10,376	12,156
Fulton, Tom, Wichita Falls	1,222	1,600
Faith Oil Corp., Wichita Falls	35	27
First National Bank of Wichita Falls, Estate of G. W. Mennis, Wichita Falls	2,108	2,800
Franklin, Wirt, Ardmore, Okla.	285	407
Fraser, H. H., Wichita Falls	20,377	28,841
Flynn, W. B., Beaumont	5,757	6,535
Fresno Oil Co., Wichita Falls	30,101	38,830
F. H. E. Oil Co., Sherman	18,061	20,914
Fleming & Kimbell, Sherman	4,463	3,973
Ferguson, W. R., Wichita Falls	577	797
First National Bank of Wichita Falls	111	156
Fullerton, W. R., (6-30-30), Wichita Falls	763	1,022
Fullerton, W. R. Wichita Falls	1,573	2,108
Fullerton, W. R., Wichita Falls	809	1,095
Finston, Mark, Tulsa, Okla.	9,510	12,029
Fort Bend Oil Co., et al, Houston	16,379	17,899
Fain-McGaha Oil Corp., Wichita Falls	353,187	483,837
Farlyn Oil Co., Houston	10,939	7,876
Fisher, J. A., Wichita Falls	893	1,286
Freeman-Hampton Oil Corp., Wichita Falls	9,381	12,758
Forest Oil Corp., Tr., Luling	8,634	8,634
Frontier Oil Co., San Antonio	9,079	9,995
Fountain Prod. Co., Saratoga	1,526	1,526
Four Oil Co., Wichita Falls	1,203	1,597
Freeman, J. F., Wichita Falls	2,476	2,888
Gulf Production Co., Houston	7,377,163	7,369,092
Group No. 1 Oil Corp., Fort Worth	741,874	1,048,129
Gibson Oil Corp., (10-1-29 to 6-30-30), Amarillo	....	9,871
Grayburg Oil Co., (2-1929 to 9-1930), San Antonio	.....	4,355
Grand Falls Oil Co., Big Spring	1,503	1,394
Glodis Oil Co., Saratoga	2,935	2,813
Gray & Adams, Inc., Gainesville	2,567	2,687
Grassroots Oil Co., Fort Worth	1,573	2,189
Gordon, Ann B. Oil Co., Inc., Dallas	4,390	6,600
Gordon Oil Co. of Texas, Logan, Ohio	73	99
Goldsmith, N. D., Olney	5,429	7,732
Granite Oil & Gas Co., Ridgway, Colo.	385	557
Glass Bros., Rosebud	511	651
Gaither Production Co., Rockdale	686	899
Gilbert Company, Beaumont	6,643	7,640
Guthrie Cole & Ferguson, Wichita Falls	681	900
Gorsuch Oil Co., Abilene	3,026	4,053
Gillman Bros., Amarillo	1,126	1,268
Glover & Wall, Vernon	606	812
Glenridge Oil Corp., St. Louis, Mo.	3,122	4,198
Grisham-Hunter Corp., Abilene	3,481	4,451
Gunn Production Co., Cross Plains	592	848
Godley Oil & Gas Co., Dallas	22,854	22,392
Gopher Oil Co., Amarillo	1,572	1,880
G. & K. Production Co., Fredericksburg	1,082	1,213
Gandy & Peyton, Corsicana	1,545	1,914
Ginter-Jones Oil Co., San Antonio	413	483
Ginter-Lange Oil Co., San Antonio	1,321	1,612
Guernsey Oil & Gas Co., Pampa	5,612	7,027
Grandfalls Oil Co., Big Springs	1,601	1,467
Gilman & McMurray, Cisco	20,698	27,631
Gray, K. C., Vernon	351	445
Gates Oil Co., San Antonio	3,171	3,179
Gilliland-Rosser Oil Co., Wichita Falls	8,031	11,352
Gilliland, C. W., Wichita Falls	1,853	2,575
Goodwin & White et al, Breckenridge	377	480
Goodwin, P. B., Tr., Breckenridge	3,315	2,571
Graham & Harrison, South Bend	4,859	6,745
Galvez Oil Corp., Tulsa, Okla.	4,194	5,592
Gilman & Conway Bros., Ranger	3,976	6,117
Green, W. J., Wichita Falls	137	168
Breen & Owens, Brownwood	178	250
Gainesville Oil & Development Co., Gainesville	754	756
Golden West Oil Co., San Antonio	19,344	16,427
Graham & Lash, Cisco	140	187
Graham, W. T. Cisco	305	375
Gibson Oil Corp., Amarillo	33,687	37,116
Gordon & Morris, Breckenridge	2,670	3,686
Gates Oil Co., Ardmore, Okla.	2,521	3,484
Gardner, Wilson & McCaldin, Wichita Falls	847	1,200
Grayback Development Corp., Wichita Falls	31,491	40,244
Gates-Bacon-Lea, Wichita Falls	3,553	4,690
Golding & Cochran, Wichita Falls	44,200	60,619
Golding, Dudley S., Wichita Falls	22,106	21,021
Grayce Oil Co., Wichita Falls	18,766	25,726
Gibson & Johnson, Inc., Fort Worth	6,918	10,355
Gallagher & Lawson, Desdemona	254	313
Grayburg Oil Co., San Antonio	175,643	149,976
Gwynn-Boyd Drilling Co., Wichita Falls	5,897	8,034
Gwynn, P. F., Wichita Falls	1,268	1,860
Grayburg Oil Co., San Antonio	3,359	2,624
Gwynn, P. F., Wichita Falls	600	801
Golding Phillips Oil Co., Amarillo	1,701	1,343
Gillette, J. M., Tulsa, Okla.	340	509
Humble Oil & Refining Co., Houston	7,519,384	8,443,088
Holloway, R. R., Recv., Brownwood	1,518	1,958
Harris & Simons, Tulsa, Okla.	4,882	3,515
Hawkins, W. L., Wichita Falls	2,185	2,939
Hill, W. R., Tr., Burkburnett	178	259
Hart Bros., Baird	219	377
Hammond, J. G., Tulsa, Okla.	173	239
Hyde Production Co., Houston	1,295	1,475
Hyde, George, Houston	8,209	8,984
Hutton, A. G., (6-30-30), Muenster	302	293
Hampton & Wilson, (6-30-30), Wichita Falls	115	138
Hambleton, George, (6-30-30), San Antonio	407	456
Hoffman & Page Co., Eastland	21,556	29,088
Hankamer, Earl C. & Co., (12-31-29), Sour Lake	226	294
Hankamar, Earl C. & Co., (3-31-30), Sour Lake	293	308
Hankamar, Earl C. & Co., (6-30-30), Sour Lake	248	286
Hamill & Hamill, Bay City	5,691	4,838
Hart Oil Corp., Fort Worth	181	249
Huffman Oil Corp., Amarillo	3,416	3,252
Houston Oil Co. of Texas, et al, Houston	575,202	529,774
Haskell, Frank, (6-30-30), Tulsa, Okla.	1,889	2,333
Haskell, Frank, Tulsa, Okla.	1,806	2,236
Hanlon Gasoline Co., Tulsa, Okla.	1,391	1,802
Hickok Producing & Development Co., Toledo, O.	131	165



The *Ideals* of Leadership

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Name..... Address.....

Name and Address	Barrels	Value
Hope Oil & Gas Co., Fort Worth	9,880	13,073
Hankamer, Earl C. & Co., Sour Lake	206	237
Huber, J. M. Petroleum Co., (6-30-30), Borger	28,969	29,099
Huber, J. M. Petroleum Co., Borger	63,432	62,907
Hutton, A. G., Muenster	797	765
Hedrick-Camp Drilling Co., Wichita Falls	12,030	14,978
Howard, Duffield & Berlin, Tulsa, Okla.	988	1,168
Hickey, T. J., et al, Corsicana	59	78
Houghland Production Co., Dallas	2,195	2,572
Herring, S. C., Brownwood	652	967
Hamon, Jake L., (6-30-30), Ardmore, Okla.	1,223	1,811
Hickory Oil & Gas Corp., Fort Worth	5,973	8,211
Hyde & James, Albany	1,416	1,764
Hadlock Oil Corp., El Paso	922	937
Hambleton, Geo., San Antonio	361	405
Hemby, J. M., Electra	699	962
Harper Petroleum Corp., Bryson	26,402	36,111
Hobson & Voorhees, San Antonio	547	667
Hughes, J. K. Oil Co., Mexia	18,069	23,309
Hamilton, Walter R., Tr., San Antonio	3,968	5,118
H-Y Oil Co., Inc., Fort Worth	18,433	25,138
Hefley, McIntosh & Thomas, Cameron	546	696
Hardy Oil Co., Wichita Falls	1,470	1,988
Hamilton & Martin, Wichita Falls	1,171	1,559
Hobbs, Ferguson & Neeley-LeRoy Adams Addison, H. Gibson, Tulsa, Okla.	3,407	3,948
Hobbs Oil Co., Tulsa, Okla.	1,213	1,699
Hoppes, W. T., Burkburnett	26	35
Hoppes, W. T., Burkburnett	555	772
Howard Petroleum Corp., Tulsa, Okla.	1,025	1,218
Hunter Oil Corp., Chicago, Ill.	43,263	60,153
Houston Production Co., Houston	50,463	60,525
Hardie, J. M. & Co., Sour Lake	256	295
Holbrook & Woods, Wichita Falls	5,650	7,383
Hamilton, W. B., Wichita Falls	232	244
Helvetia Oil Co., San Antonio	10,954	12,192
Home Oil & Gas Co., Inc., Albany	1,743	2,209
Hyer, Fred, Fort Worth	17,890	14,765
Hawley, J. A., Guardian, Hawley, Kevin, Minor, Ottawa, Ontario, Canada	191	249
Horn, T. W., Houston	1,426	1,640
Hunter, T. F., Wichita Falls	47,252	63,836
Herrogan Oil Corp., Pampa	14,450	15,041
Hill & Dowell, Batson	10,677	12,278
Hemisphere Oil Corp., New York, N. Y.	17,945	22,507
Hammond & Waggoner, Wichita Falls	576	827
Herbert Oil Co. of Texas, Fort Worth	6,153	8,075
Humphreys Bros., Inc., Houston	1,464	1,948
Humphreys Corp., Houston	282,787	324,616
H. B. J. Oil & Gas Trust, Baltimore, Md.	1,785	2,442
Hamon, Jake L., Ardmore, Okla.	24,249	33,874
Harrison Oil Co., Houston	80,330	115,919
Hines, Harry, Wichita Falls	2,652	3,663
Halmack Oil Co., Dallas	198	293
Hammon, W. H., Wichita Falls	24,891	35,608
Hammon & Heyser, Wichita Falls	10,674	14,247
Holmes & Huey, Borger	2,851	2,965
Houston Gulf Gas Co., Houston	8,244	7,074
Harwell, E. P., Tulsa, Okla.	1,782	2,461
Hart Bros., Baird	232	276
Hammong, J. G., Tulsa, Okla.	148	212
Hemby, J. M., Electra	148	204
Holmes, Hill, Seibold & Holmes, Amarillo	14,351	19,577
Holmes Bros., Amarillo	17,817	23,583
Holmes, W. H. & W. W., Amarillo	4,046	5,240
Hart, J. R., & M. D. Heist, Baird	505	636
Howard County Oil Corp., Pettus	26,786	22,113
Handrick, August, Moran	149	163
Hamilton, W. L., Bridgetown	906	1,296
Holcombe, Thos., Wichita Falls	1,863	2,647
Hitchman & Howard, Inc., San Antonio	1,952	2,300
Heidrick, E. C., Jr., Amarillo	4,517	4,659
Henson, G. D. & R. V. Tidwell, Graham	6,113	8,265
Ingram, J. A., Shawnee, Okla.	473	484
Irick Oil Co., Waskom	260	338
Investors Oil & Gas, Sioux Falls, South Dakota	562	2,039
Big Indian Oil & Development Co., Gainesville	1,059	1,398
Infield Petroleum Co., Austin	524	592
Independent Oil & Gas Co., Tulsa, Okla.	371,200	347,094
Isaacks, B. K., Recv. J. K. Hughes Developing Co., Fort Worth	1,123	1,224
Julian, C. C., Oil & Royalties Co. et al, (6-30-30) Oklahoma City, Okla.	10,538	15,359
Jones, J. F., et al, (6-30-30) Abilene	134	168
James, Tom, Albany	6,085	8,353
Jackson, The, Company, San Antonio	903	977
Jones, W. A., Minerva	1,756	2,178
Jones, Edwin M., San Antonio	143,240	131,084
Jones, O. P. & C. J. Oates, Amarillo	1,731	1,850
Jones, J. A., Moran	235	340
Junker, W. H., et al, Olney	156	183
Janellen Oil Co., Brownwood	105	116
Jones, J. E., Wichita Falls	2,590	3,621
Judson Oil Co., Tulsa, Okla.	6,401	9,039
Julian, C. C., Oil & Royalties Co. et al, Oklahoma City, Okla.	17,372	24,844
Jackson, J. S., Tr., Sour Lake	2,756	3,169
Justin Oil Corp., Wichita Falls	6,938	9,333
Jackson, T. H., Sipe Springs	86	101
Jonray Oil Co. (6-30-30), San Antonio	1,805	1,937
Jonray Oil Co., San Antonio	1,770	1,911
Julia Oil Co., Sour Lake	3,206	3,688
Johnson Bros., San Antonio	5,274	6,336
Jones, Hugh, Burkburnett	2,742	3,579
Koenig, Max W., (6-30-30), Oakland, Calif.	17,017	14,339
Keller, J. E. (3-31-30), Iowa Park	78	103
Keller, J. E. (6-30-30), Iowa Park	242	335
Kleinfelder, B. F., Breckenridge	293	389
Kerr, T. P., Corsicana	597	789
Kimbell, G. T., & John L. Bostic, Burkburnett	4,478	6,090
Kimmell & Woofter, Wichita Falls	4,075	5,777
Kuhlemeier-Kleiner Oil Co., Cisco	1,534	2,131
Kokomo Pet. Co., Gorman	260	345
Keck Investment Co., Los Angeles, Calif.	5,243	4,509
Kewanee Oil & Gas Co., Titusville, Pa.	154,828	214,096
Kurz Oil Co., Somerset	457	466
Kavanaugh Petroleum Co., Houston	3,832	5,077
King, R. A., Tr., Wichita Falls	746	634
Karona Oil Co. (6-30-30), Refugio	5,812	4,701
King & Daniel, Wichita Falls	6,041	8,161
Knox, D. M., Graham	28,054	39,053
Kidney-Kamon et al, Fort Worth	3,411	4,741
Kistler, Frank E. & Co., San Antonio	1,720	1,544
Karona Oil Co., Refugio	3,584	3,046
Kohlman, Richard, Iowa Park	529	666
King Royalty Co., Wichita Falls	136,407	186,946
Kleiner, Charles J., Cisco	26,089	35,504
Kemrow Company, Wooster, Ohio	12,517	17,298
Koenig, Max W., Oakland, Calif.	18,319	15,571
Knotts, Nona A., Wichita Falls	486	689
Kurz, A. A., Somerset	282	335
Kisk Oil Co., Wichita Falls	305	354
Klemcke, George, Tr., Von Ormy	1,377	1,440
Kahle, Gracey & Diver, Bridgeport, Ill.	2,635	1,896
Kate Bell Oil Co., Dallas	1,003	1,368
Kay, A. W., & W. B. Fultz, John Kisinger Farm, Graham	6,328	8,841
Kay, A. W., & W. B. Fultz, J. J. Scott Farm, Graham	3,131	4,300
Kay, A. W., Recv., Jones et al, J. E. Keen Farm, Graham	904	1,230
Keener Oil & Gas Co. of Texas, Tulsa, Okla.	3,767	4,930
Kent, G. C., Corsicana	18,180	21,272
Kolp, C. F., Electra	19,771	26,748
Keystone Production Co. of Texas, Fort Worth	2,617	3,680
Kaufman, L., San Antonio	428	437
Kirby Petroleum Co., Houston	79,363	65,077
Kelly, Geo. L., Tr., Wichita Falls	397	540
Killam, O. W., Laredo	235,002	199,752
Lela Oil & Gas Co. (6-30-30), Amarillo	1,275	1,121
Lyne Oil Co., Inc. (6-30-30), Brenham	935	626
Lyne Oil Co., Inc. (3-31-30), Brenham	690	465
Lyne Oil Co., Inc., (12-31-29), Brenham	270	182
Loggie & Arendt Oil Co., Inc., Albany	2,859	3,487
Luling Oil & Gas Co., San Antonio	29,699	25,244
Lytle, C. F., Mexia	10,085	12,978
Lewis, J. E., et al, Eastland	971	1,295
Lloyd Oil Corp., Fort Worth	62,549	78,187
Ledger Oil & Gas Co., Brownwood	871	1,206
Little Caddo Syndicate, Fort Worth	1,224	1,704
Lowery Oil Corp. (Mch. and June, 1930), Burkburnett	3,035	3,824
Lefors Petroleum Co., Lefors	33,687	40,474
Linedo Oil Co., Lincoln, Neb.	864	734
Lomax, Thornton, Jr., Wichita Falls	2,260	3,079
Landreth Production Corp., Fort Worth	299,291	261,405
Louisiana Oil Refining Corp., Shreveport, La.	517,723	590,541
Lake View Oil Co., Sour Lake	10,988	12,636
Little, Wm., Breckenridge	278	349
Last Chance Gas Co., Pampa	893	929
Letwin & Lippitt, Breckenridge	12,778	17,230
Lackey, W. G., Co., Tulsa, Okla.	1,916	2,553
Leiser-Rochmill Production Co., Inc., Fort Worth	1,406	1,911
Lake Graham Oil Co., Houston	2,261	2,772
Lowenstein Oil Co., Rockdale	977	1,270
Lewis, J. E. & Co., Eastland	2,425	3,323
Lido Oil Co. & McGinley Sigler Co., Wichita Falls and Fort Worth	21,203	25,630
Lion Oil Refining Co., El Dorado, Ark.	573,965	444,578
Long, Roy Oil Co., Navasota	1,486	2,015
Lebow, C. H., Tulsa, Okla.	1,220	1,787
Lewis Production Co., Pittsburgh, Pa.	37,036	48,377
Lockhart & Co., Los Angeles, Calif.	86,813	92,797
Lesh & McCall, Nocona	16,223	10,951
Little Flower Oil Co., St. Louis, Mo.	439	532
Leonard Oil Co., Somerset	181	194
Leonard, Geo. Somerset	910	961
Lowe, Delaney & Carter, De Leon	4,969	6,372
Langford Oil Co., Inc., Wichita Falls	1,352	1,830
Lesh, Kilcrease & Co., Nocona	1,386	1,187
Lesh, John I. & Co., Wichita Falls	5,581	4,093
Lawson, Eugene B., Tulsa, Okla.	45,978	61,951
Long, L. A., Graham	39,927	57,621

VERTICAL TANDEM TWO STAGE COMPRESSOR

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GARDNER-DENVER

Name and Address	Barrels	Value
Lloyd Oil Corporation of Texas, Fort Worth	31,147	38,934
Lela Oil & Gas Co., Amarillo	759	584
Lone Star Gas Co., Dallas	39,556	58,078
Long, C. B., et al, Wichita Falls	291	365
LaSalle Petroleum Co., Tulsa, Okla.	3,651	4,834
Lee & Scott, Inc., Houston	1,705	1,960
Lee & Wilson, Houston	5,425	5,982
Lee, Homer, Wichita Falls	11,290	15,526
McHugh, G. E. (6-30-30), Graham	200	279
McCarter, R. C., Rising Star	636	832
McClintock, J. G. (6-30-30), Amarillo	....	10,450
McAlbert Oil Co., Inc., Houston	128,731	140,039
McNallen & Griffin, Tulsa, Okla.	5,083	6,677
McCormick & Noack-Wooten, Rockdale	69	88
McChesney, Nancy, Olney	5,136	6,405
McMurray, J. L., et al, Cisco	1,796	2,626
McCarty Oil Co., Wichita Falls	78,371	113,010
McMurray, Root & Rhodes, Eastland	828	1,300
McGinley-Sigler Co., Fort Worth	5,253	6,285
McGrary, E. W., Tulsa, Okla.	5,646	7,143
McNamara Oil Co., Beaumont	2,490	2,863
McDonald & Campbell, Dallas	8,011	10,705
McDaniel Oil Corp., Cisco	3,871	5,740
McCutcheon, C. E., Wichita Falls	243	339
McCutchen, C. E., Tr., Wichita Falls	4,768	6,657
McLester Oil Co., Eastland	8,672	13,471
McBride, W. C., Inc., St. Louis, Mo.	5,777	7,153
Roeser & Pendleton, Inc. (McGraw Oil Co.), Fort Worth	821	1,049
Roeser & Pendleton, Inc., (McGraw Oil Co.), Fort Worth	209	251
McMan Oil & Gas Co., Tulsa	1,073,385	1,023,333
McIlroy Oil Co., Amarillo	34,260	34,365
McJunkin, Florence T., et al, Tulsa, Okla.	647	903
Moran Company, The, Wichita Falls	14,984	19,784
Maxwell, J. C., Fort Worth	49,523	43,341
Manning Oil Corporation (6-30-30), Fort Worth	2,701	3,142
Manning Oil Corporation (3-31-30), Fort Worth	2,205	2,499
Martin, Drake & Jones, (3-31-30), Houston	21,327	23,109
M. & V. Oil Company, (6-30-30), Wichita Falls	4,377	6,111
C. S. Messenger et al, per Aug. 1929 to June 30, 1930, Ft. Stockton	6,402	6,065
Mid-Continent Holding Corp. (6-30-30), Wichita Falls	14,195	20,814
Mid-Continent Holding Corp. (3-31-30), Wichita Falls	14,920	21,131
Mart, E. R., (6-30-30), Dallas	738	546
Martin, Drake & Jones (6-30-30), Houston	20,753	23,664
Meredith & Benton & Curt Horrmann (6-30-30), Cisco	584	798
May, F. N., (6-30-30), Santa Anna	195	242
Mancill, R. W., (6-30-30), Cisco	174	195
Matador Oil Corporation (July, 1928 to Apr. 30-30), Bartlesville, Okla.	54,752	35,589
Marrs McLean, Beaumont	34,748	33,011
Mills & Garity, Corsicana	2,147	2,577
Mancill, R. W., Cisco	111	130
Minerva Petroleum Company, Minerva	704	944
Minor Oil Company, Beaumont	8,487	9,760
Montgomery-Rea-Montgomery, Sedwick	1,260	1,717
Morgan, et al, Ray, Fort Worth	870	1,236
Milham Corporation of Texas, Fort Worth	1,668	2,363
Menke, John G., Wichita Falls	1,039	1,450
Madden & Hunt, Olney	13,517	18,804
Madden, E. B., Olney	17,092	24,224
Margarett Oil Company, Albany	683	881
Moody Corporation, Houston	501,336	448,430
Medio Oil Company, San Antonio	900	1,096
Mecam Oil Company, Liberty	2,921	2,921
Moody Seagraves Producing Co., San Antonio	589,431	582,139
Mid-Continent Petroleum Corp., Tulsa, Okla.	26,834	25,800
Marts, et al, E. R., Dallas	49,394	38,205
Margaret Oil Company (3 31-6-30-9-30-30) Cross Plains	874	1,158
Mozzle Oil Corporation, Eastland	957	1,201
Mendenhall Oil Company, Cisco	1,059	1,568
Macknold Company, San Antonio	185	190
Mount & Lee, Inc., Wichita Falls	1,442	1,932
Moore, N. A., Eastland	591	769
Major, A. W., Laredo	2,088	1,774
Martin, N. H., Wichita Falls	17,844	20,105
Martin & Hamilton, Wichita Falls	3,119	4,047
Meridian Petroleum Corporation, Tulsa, Okla.	4,288	5,536
Meredith & Benton & Curt Horrmann (9-30-30) Cisco	1,036	1,487
Midwest & Gulf Company of Texas, Tulsa, Okla.	1,630	1,757
Meredith & Gant, Wichita Falls	2,114	2,454
Magnolia Petroleum Company, Dallas	2,843,473	3,000,489
Murchison Oil Company, Fort Worth	94,940	74,538
Moore, F. L., Trustee, Tulsa, Okla.	1,688	2,259
Minntex Oil Corporation, Wichita Falls	744	896
Merrick & Lamb, Ardmore, Okla.	33,398	31,415
Merrick & Bristow, Ardmore, Okla.	45,598	34,062
Mordyan Petroleum Company, Pampa	56,080	67,411
Midland Oil Company, Fort Worth	401	517
Mitcham, G. P., Cisco	816	1,035
Moss, Urschell & Keys, Dallas	6,737	8,691
Moss & Urschell, Dallas	12,860	16,438
Midwest Exploration Company, The, Denver, Colo.	167,824	209,329
Mann & Forbes, Graham	2,591	3,558
M. & V. Oil Company, Wichita Falls	2,985	3,925
Merrick & Goldsmith, Wichita Falls	4,502	6,438
Merrick, John F., Wichita Falls	461	595
Merrick & Belcher, Wichita Falls	6,473	10,160
Marine Corporation, The, Dallas	3,571	3,014
Medina Oil & Gas Association, San Antonio	128	137
Mues & MacDermott, Fort Worth	389	515
MacDermott, W. F., Fort Worth	582	778
Mills Bennett Production Company, Houston	405,947	440,295
Minnehoma Oil & Gas Company, Tulsa, Okla.	2,071	1,916
McFall, J. M., Wichita Falls	730	901
Mid-Kansas Oil & Gas Company, Findlay, Ohio	3,218,001	2,646,006
Madison Oil & Gas Company, Electra	3,883	5,683
Marnet Oil & Gas Company, Tulsa, Okla.	4,957	6,594
Millikin, L. L., Burkburnett	281	345
Massie, J. H., Wichita Falls	61,264	83,853
Mann, Floyd, Graham	1,786	2,460
Moran Drilling Company, Wichita Falls	138	179
Mook-Texas Oil Company (6-30-30), Fort Worth	9,395	12,749
Mook-Texas Oil Company (9-30-30), Fort Worth	7,372	9,984
Mueller, Alvin P., Rec. for D. D. Baker, Seguin	73,293	67,959
Mayberry Company, C. R., Laredo	2,154	1,831
Marshall, George S., Laredo	4,157	3,326
Magee, R. B., Wichita Falls	1,291	1,866
Moody Seagraves Producing Co., San Antonio	589,431	582,139
Meredith & Gant, Wichita Falls	2,114	2,454
Minntex Oil Corporation, Wichita Falls	744	896
Mid-Continent Holding Corp. (9-30-30) Wichita Falls	16,044	24,082
Nordan & Morris, (6-30-30), Laredo	1,853	1,575
Newton & Lillie, Shreveport, La.	17,544	20,176
National Oil Company, San Antonio	652	660
Navarro Oil Company, Houston	177,526	195,344
Noack & Lanning, Rockdale	76	97
Noack Oil Company, Rockdale	1,180	1,544
Noack & Lanning, Rockdale	223	292
Nordan & Morris, (9-30-30), Laredo	602	512
Newton-Palmer Oil Company, Rockdale	374	490
Nabob Oil & Gas Company, Amarillo	26,701	32,605
Number Nine Oil Corporation, Tulsa, Okla.	2,702	3,700
Nutt & Gates, Wichita Falls	2,259	3,310
Nix & Dale, (6-30-30), Wichita Falls	2,560	3,357
Nix & Dale, (9-30-30), Wichita Falls	2,092	2,778
Nash, Windfohr & Perry, Austin	51,888	51,888
North Fork Oil Company, Amarillo	4,371	4,940
Nash & Windfohr Oil Corporation, Graham	171,477	249,042
Newport & Ohio Petroleum, Newport, N. Y.	392	536
Oil Fields Corp. of Arkansas, El Dorado, Ark.	52	65
Omilak Oil Company, (6-30-30), Somerset	178	196
Owenwood Pool Number 3, Fort Worth	3,808	4,961
Oil Investment Company, Wichita Falls	2,064	2,783
Oil Royalty Corporation, Brownwood	181	177
Olean Petroleum Company, Bristow, Okla.	16,238	13,212
O'Neil, John, Wichita Falls	12,511	17,928
O'Brien, W., Amarillo	659	666
Oriental Oil Company, Dallas	431	435
Orange Petroleum Corporation, Orangefield	24,306	27,645
Oasis Oil Company, Wichita Falls	161	210
Owen-Sloan Oil Company, Philadelphia, Pa.	64,179	46,730
Omalak Oil Company, (9-30-30), Somerset	150	167
Ohio Somerset Oil Company, The, Cleveland, Ohio	1,177	1,236
Olney Oil & Refining Company, Wichita Falls	254	334
Penn Oil Company, (6-30-30), Dallas	21,662	21,844
Prairie Oil & Gas Company, The, Independence, Kansas	452	632
Penn Oil Company, (3-31-30), Dallas	17,359	18,777
Penn Oil Company, (6-30-30), Dallas	11,602	13,211
Putnam Supply Company, (6-30-30), Putnam	466	585
Putnam Supply Company, (3-31-30), Putnam	407	476
Putnam Supply Company, (12-31-29), Putnam	483	677
Pennowa Oil & Gas Company, (6-30-30), Skiatook, Okla.	10,280	11,387
Pinto Oil Company, (3-31-30), Mineral Wells	127	138
Pinto Oil Company, (6-30-30), Mineral Wells	101	108
Palmer Oil Company, Freddie, (6-30-30), Rockdale	141	161
Philp Bros., Beaumont	2,809	3,231
Piper, Trustee, L. E., Vernon	1,875	2,516
Pettit Oil Corporation, Trees, La.	1,506	2,212
Permian Oil Company, Eastland	9,922	15,539
Powell, J. L., Wichita Falls	380	517
Price, Russell & Company, Ranger	3,586	5,054
Panhandle & Santa Fe Ry. Co., Wichita, Kansas	6,206	4,034
Preston Oil & Gas Company, Brownwood	287	375
Poor Boy Oil Company, Rockdale	310	395
Powers Production Company, Houston	2,719	2,544
Pure Oil Company, The, Chicago	448,275	524,839
Phair, F. L., Houston	175	118
Pivoto, M. E., Sour Lake	7,331	8,430
Portland Drilling Corporation, Wichita Falls	720	983
Pioneer Oil, Gas & Refining Company, Danville, Ill.	1,022	1,201
Pandem Oil Corporation, Wichita Falls	23,981	32,037

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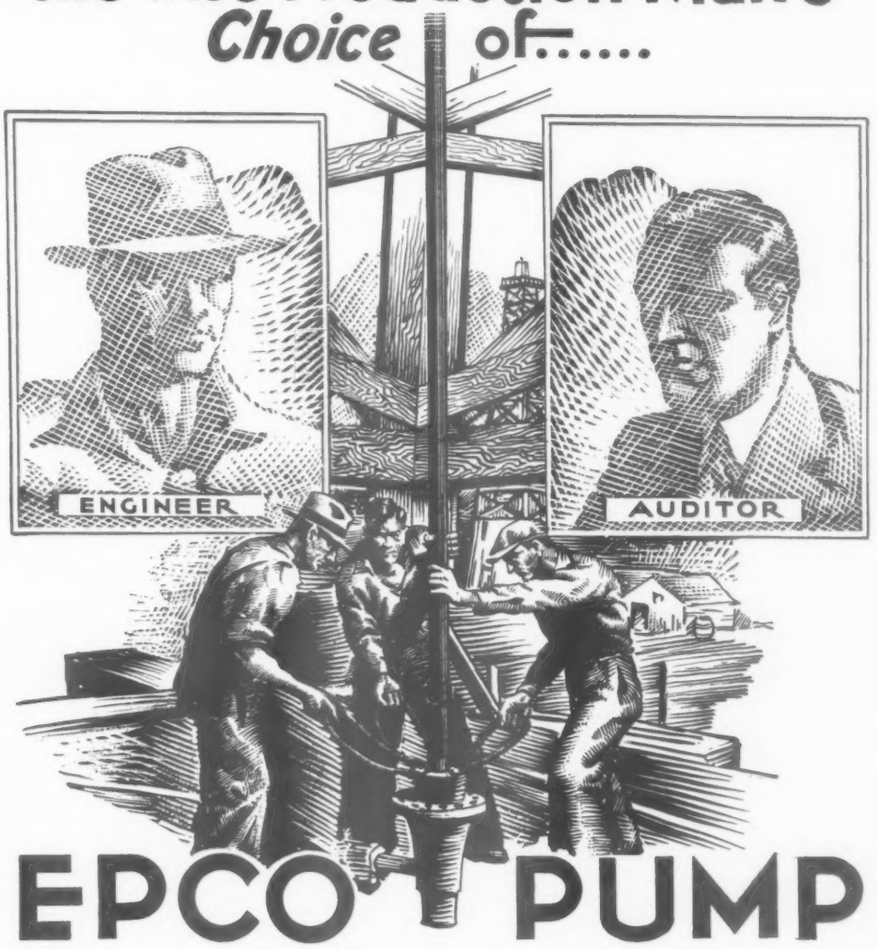
LOS ANGELES

Name and Address	Barrels	Value
Perkins & Snider Lease, Wichita Falls	5,095	7,477
Piney Oil & Gas Company, New York	4,659	4,211
Pollard, W. E. & C. E., Pampa	4,757	5,780
Pure Oil Company, The, Chicago	2,260,006	2,758,728
Pois, Trustee, M., Wichita Falls	136	188
Pois, Fine & Schulz, Wichita Falls	622	890
Pois, M., et al, Wichita Falls	3,235	4,552
Proctor, George, Wichita Falls	15,153	22,095
Prechel, Walter, Wichita Falls	2,548	3,616
Powell, H. J., Trustee, San Antonio	5,256	5,109
Peery, Thos. H., Wichita Falls	5,756	8,177
Producers & Refiners Corp. of Texas, Independence, Kansas	8,034	10,895
Putnam Oil Company (9-30-30), Tulsa, Oklahoma	34,659	46,447
Palmer & Burch, Inc., Wichita Falls	11,339	15,894
Palmer & Burch, Inc., Wichita Falls	1,587	2,167
Phillips, J. R., Amarillo	2,422	2,186
Prairie Oil & Gas Company, The, Independence, Kansas	1,058,004	1,186,701
Petroleum Producers Company, Wichita Falls	83,263	117,963
Panhandle Refining Company, Wichita Falls	148,022	198,285
Phillips Petroleum Company, Bartlesville, Oklahoma	183,363	146,455
Phillips Petroleum Company, Bartlesville, Oklahoma	13,228	19,539
Phillips Petroleum Company, Bartlesville, Oklahoma	908	1,307
Phillips Petroleum Company, Bartlesville, Oklahoma	210,069	269,179
Phillips Petroleum Company, Bartlesville, Oklahoma	40,235	56,371
Phillips Petroleum Company, Bartlesville, Oklahoma	877	1,173
Phillips Petroleum Company, Bartlesville, Oklahoma	6,424	8,581
Phillips Petroleum Company, Bartlesville, Oklahoma	26,783	35,724
Phillips Petroleum Company, Bartlesville, Oklahoma	9,727	13,665
Phillips Petroleum Company, Bartlesville, Oklahoma	763	1,089
Phillips Petroleum Company, Bartlesville, Oklahoma	4,904	4,712
Phillips Petroleum Company, Bartlesville, Oklahoma	835,989	1,047,501
Phillips Petroleum Company, Bartlesville, Oklahoma	9,936	14,811
Phillips Petroleum Company, Bartlesville, Oklahoma	771,966	783,911
Pemeta Oil Company, Fort Worth	3,781	5,168
Paraffine Oil Company, The, Houston	8,092	9,306
Poole, B. O., Batson	2,493	2,867
Peckham, F. W., Stamford	890	673
Py-Tex Oil Company, Brownwood	882	1,271
Porterfield, R. R., Graham	5,758	7,813
Pace, Geo. L., Wichita Falls	3,764	4,642
Producers Supply & Tool Company, The, Marietta, Ohio	10,544	11,994
Pitzer & West, Breckenridge	12,446	16,989
Primrose Oil Company, Somerset	1,130	1,298
Paggi Bros. Oil Company, Beaumont	7,198	8,277
Paggi & Company, Chas., Beaumont	780	897
Palmer Oil Company, Freddie (9-30-30), Rockdale	143	188
Plymouth Oil Company, Pittsburgh, Pa.	43,865	36,809
Penn Oil Company (9-30-30), Dallas	16,138	17,247
Perkins, J. J., Wichita Falls	1,041	1,038
Producers Drilling Company, Wichita Falls	1,448	1,964
Palo Duro Oil Company, Amarillo	2,058	2,106
Pharis Oil Company, Amarillo	240	210
Pilkerton, F. L., Burkburnett	1,182	1,550
Pace & Ward, Breckenridge	1,704	2,243
Penn-Tex Oil Company, San Antonio	1,781	2,018
P & M Oil Company (3-31-30), Oil City, Pa.	73	98
P & M Oil Company (6-30-30), Oil City, Pa.	36	52
P & M Oil Company (9-30-30), Oil City, Pa.	73	103
Pelwin Oil Corporation, Wichita Falls	632	837
Pecos Crude Oil Purchasing Company, San Angelo	219	166
Pecos Crude Oil Purchasing Company, San Angelo	1,297	519
Perkins & Cullum, Wichita Falls	173,262	232,783
Patterson Properties Corporation (Oct, 1-29 to June 30, 1930), Fort Worth	4,917	7,271
Quinn, J. W., et al, Eastland	2,097	3,073
Quincey Oil Company, Vernon	131	185
Rockdale Junior Oil Company, Rockdale	76	97
Reed, Crenshaw & Glass (6-30-30), Nowata, Okla.	10,510	14,598
Ramsey & Decker, (3-31-30), Breckenridge	61	71
Ramsey & Decker (12-31-29), Breckenridge	542	918
Ross, Segunda Oil Company (6-30-30), Laredo	422	359
Ross, Segunda Oil Company (3-31-30), Laredo	368	276
Ross, James F. (3-31-30), Laredo	2,887	2,165
Ross, James F. (6-30-30), Laredo	2,650	2,262
Ross Amigos Oil Company (3-31-30), Laredo	10,367	7,929
Ross Amigos Oil Company (6-30-30), Laredo	9,501	8,076
Roberts, H. W., Wichita Falls	2,041	2,919
Richardson Trust Co. and M. L. Dresser, Markley	1,747	2,201
Robinson, Arthur D., Dallas	5,757	6,582
Reclamation Company, The, Fort Worth	5,114	6,641
Richardson and C. F. Kelsey, S. W., Fort Worth	45,351	41,814
Ruby Oil Company, Minerva	151	198
Red River Oil Company, Tulsa, Oklahoma	25,868	35,690
Ranell Oil Company, Oklahoma City	3,454	4,637
Refugio Oil Corporation, Refugio	69,503	50,577
Rowe, J. G., Wichita Falls	2,297	3,271
Roeser & Pendleton, Inc., Fort Worth	185,808	253,772
Rio Bravo Oil Company, Houston	806,787	947,400
Ramming, W. F., Wichita Falls	84	117
Reiter-Foster Oil Corporation, Tulsa	10,887	14,734
Rountree & White, Rockdale	461	604
Ruyle Farm & Oil Company, Wichita Falls	6,206	8,975
Roth & Faurot Oil & Gas Company, The, Independence, Kansas	3,106	4,626
Reed, W. M., Breckenridge	1,184	1,447
Republic Production Company, Houston	669,153	651,787
Reeder & Scarborough, Wichita Falls	3,805	5,339
Ryan Consolidated Petroleum Corporation, Tulsa	70,341	93,954
Remington, E. H., Newcastle	5,521	7,283
Ramsel Oil Company, W. T., Rockdale	1,621	2,123
Ramsey, E. H., Rising Star	596	885
Ramming, R. W., Wichita Falls	2,124	3,013
Ramming-Staley-Ramming, Wichita Falls	541	733
Rancho Oil Company, Fort Worth	9,770	12,530
Rochmill, Trustee, Henry, Fort Worth	736	975
Rex Petroleum Corporation, Vinton, Louisiana	16,650	19,148
Reeder, R. S., et al, Wichita Falls	1,124	1,534
Rathke Oil Company, Wichita Falls	24,469	33,963
Ruthada Oil Company, Oklahoma City	5,998	5,098
Rentex Oil Company, San Antonio	7,108	8,252
Randado Oil Corporation, Oklahoma City	19,508	16,582
Riner & Omohundro, Wichita Falls	9,705	13,894
Riner & Bailey, Wichita Falls	31,610	42,260
Root, C. M., Eastland	4,547	6,108
Root Drilling Company, Eastland	4,396	5,919
Root & Rhodes, Eastland	3,963	5,339
Root, Rhodes, Gilman & McMurray, Eastland	5,474	8,002
Root & Fehl, Eastland	6,073	7,880
Rensual Petroleum Company, Pampa	3,536	4,571
Rex-Tex Oil Company, Brownwood	882	1,271
Rycade Oil Corporation, Houston	74,480	76,409
Rhodes & Highers, Breckenridge	4,251	5,924
Rhett-Wilder et al, Rockdale	678	509
Reno Oil Company, Sisterville, West Virginia	44,390	62,466
Robertson, R. R., Wichita Falls	5,384	6,860
Ribble, O. C, South Bend	255	349
Red Bank Oil Company, Tulsa	8,785	12,150
Rubsam & Hunter, Wichita Falls	6,133	8,299
Riggs, E. R. and J. T. Oliphant, Graham	8,121	11,047
Riggs, E. R., Graham	49,202	71,757
Reed, Crenshaw and Glass (9-30-30), Nowata, Okla.	6,733	9,261
Ruthada Oil Company, Oklahoma City	19,307	18,263
Rush, Anderson & Moore, Big Spring	4,138	4,138
Robert Oil Corporation, Breckenridge	20,540	28,378
Robinson, O. D., Pittsburgh	1,257	1,184
Ross, C. E., Burkburnett	575	741
Rock Creek Oil Corporation, Amarillo	3,881	3,008
Russell & Wilson, Wichita Falls	4,427	5,697
Reinhart, M. J., Trustee, Oklahoma City	482	669
Rockwell & Company, J. A., Warren, Pennsylvania	2,197	2,965
Superior Oil Producing Company (6-30-30), Tulsa	1,904	2,614
Superior Oil Producing Company (3-31-30), Tulsa	1,815	2,405
Spencer & Company, H. H. (6-30-30), Burkburnett	150	215
Strawn & Fisher (6-30-30), Electra	1,099	1,400
Seaboard Oil & Gas Company of Texas (3-31-30), Wichita Falls	29,141	39,802
Staley, J. A., Wichita Falls	1,606	2,187
Stepp & Keister (6-30-30), Coleman	145	281
Swearingen Oil Company (6-30-30), San Antonio	1,780	2,168
Southern Oil & Producing Company (6-30-30), Eastland	2,205	2,981
Southern Oil & Producing Company (3-31-30), Eastland	829	1,082
Southern Oil & Producing Company (12-31-29), Eastland	5,809	9,319
South Oil Company, The (6-30-30), Rosston, Ark.	533	630
Shoup, Jr., O. H. (6-30-30), Colorado Springs, Colorado	1,834	2,542
Schoolfield, R. E. (6-30-30), Oklahoma City	302	378
Stein, H., Ranger	663	786
Shattuck, Mrs. Nellie S., Execx., Dallas	3,009	3,987
Slicker, Homer, Cisco	912	1,168
Stephens Oil Company (6-30-30), Sour Lake	539	620
Stephens Oil Company (3-31-30), Sour Lake	456	478
Stephens Oil Company (12-31-30), Sour Lake	419	545
S. R. & C. Oil Corporation (6-30-30), San Antonio	78,631	87,668
Schlicher Oil Company, Beaumont	764	879
Sand Creek Oil Company, Amarillo	3,718	3,936
Storey-Friebele-Duffey Oil Company, Winston-Salem, North Carolina	2,374	2,041
Storey-Friebele-Duffey Oil Company, Winston-Salem, North Carolina	17,601	14,485
Simmons, T. K., Tulsa	1,168	1,499
Strelsky & Hefley, Joe, Rockdale	328	441
Stratton, Ed. F., Pioneer	294	357
Smith, Levi, et al, Texon	19,364	29,827
Stroughan & Texannati Oil Company, San Angelo	3,925	4,043
Somerset Crude Oil & Refining Company, Somerset	2,564	2,807
Somerset Oil Company, San Antonio	1,025	1,096
Stephens Oil Company (9-30-30), Sour Lake	501	576
Swanner, John L., Wichita Falls	1,506	2,076
Stump, E. J., Wichita Falls	4,499	6,461
Sircovich, A., and Mrs. F. M. Thomas, Houston	353	324
Smith, McIntosh & Thomas, Cameron	542	691
Shappell Oil Company, Wichita Falls	46,344	63,840
Spencer, H. H., & Company (9-30-30), Burkburnett	215	306
Sessions, I. P., Rockdale	463	590
Schermerhorn-Winton Company, Minneapolis, Minn.	36,026	29,291
Scott & Nance, Graham	3,111	4,213

These Two *Endorse* the wise Production Man's *Choice* of.....



EPCO PUMP

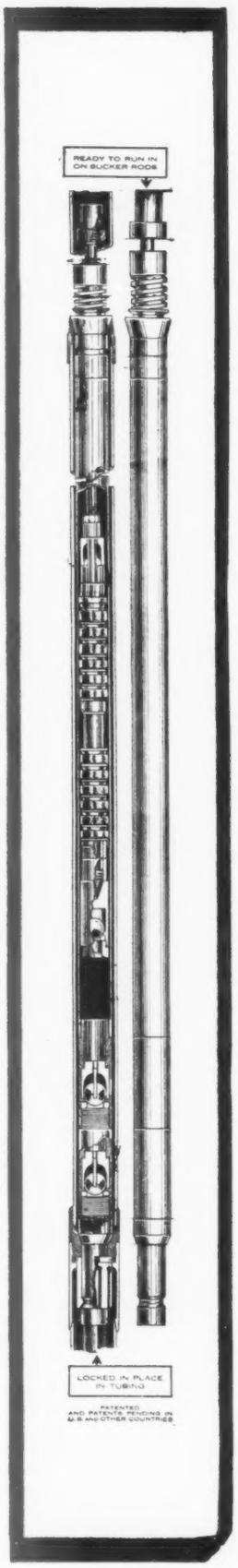
When the production man puts the EPCO PUMP in a well he begins to show remarkable savings for the owner . . . savings in production which increase the profit on every barrel of oil pumped into the tanks.

The *engineer* sees the results in fewer shutdowns, elimination of tubing jobs, longer wear of rods, fewer replacements of cups and pump parts. He sees greater returns from all equipment involved.

The *auditor* finds the story on the books in cold figures...lower fuel and labor bills, longer service from pumps, rods and parts, lower costs for repairs, when necessary. And the auditor sees that every dollar EPCO saves increases the margin of profit.

That's why, thruout the world, production men depend on EPCO PUMPS to help control costs and profits.

EPCO WILL HELP YOU TOO! IT PAYS FOR ITSELF IN SAVINGS!



"Economy is Right"

The Economy Pump & Oil Tool Co.

Offices and Factory: 4624 East 49th St., Los Angeles, Calif., U. S. A. Office and Warehouse: Ft. Worth, Texas. Representatives at Tulsa, Bristow, Ponca City, Duncan, Seminole and Earlsboro, Oklahoma; Ft. Worth, Beaumont, Big Spring and Houston, Texas; Shreveport, Louisiana; also Representatives and distributing points at Long Beach, Huntington Beach, Santa Fe Springs, Taft and Bakersfield, California, or any National Supply Company Store throughout the world.

DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES

Name and Address	Barrels	Value
Scott & Britton, Graham	142	186
Schulz & Weaver, Wichita Falls	6,999	8,691
South Shore Oil Company, Houston	5,992	6,106
South Texas Petroleum Company, Houston	135,059	198,537
Smith Oil Company, Inc., E. L., Mexia	125,431	146,470
Snowden & McSweeney Company, New York	50,943	68,932
Southern Petroleum Exploration, Inc., Sisterville, West Virginia	33,439	40,394
Scott, W. M., Wichita Falls	3,254	4,547
Standard Oil Land & Leasing Company, Electra	119	166
Smith, W. B., Trustee, Eastland	394	505
Shasta Oil Company, Wichita Falls	499	655
Scott & Walker, Albany	2,289	2,924
Shelby Oil & Gas Company, Tulsa	6,997	10,738
Smith, Levi, and Fred Hyer, Texon	762	1,116
Smith, Levi, and J. C. Shaffer, Texon	135	148
Smith, Levi, Texon	511	743
Smith, McIntosh and Thomas (Coulter Lease), Cameron	1,171	1,535
Stella Oil Company, Beaumont	15,381	17,688
Salado Oil Company, San Antonio	1,499	1,829
Smith & Bynum, Amarillo	368	392
Smith, Mrs. James L., Amarillo	2,515	2,720
Scarborough, W. A., Burkburnett	1,491	1,917
Staniforth, M., Wichita Falls	5,037	7,203
Sedwick Oil Company, Tulsa	9,799	12,554
Summit Oil & Refining Company, Amarillo	751	797
Sullivan, M. J., Kansas City, Missouri	396	507
Summerfield Oil Company, Tulsa	167	220
Saratoga Oil Company, Wichita Falls	693	1,027
Star Drilling Company, Wichita Falls	18,032	25,882
Syndicates Oil Corporation, Rochester, New York	911	1,311
Stroube & Stroube, Corsicana	52,497	56,356
Schlaffke, Edward, Electra	80	104
Schlaffke & Blair, Electra	9,735	14,510
Shaw Oil Company, Wichita Falls	41,519	56,707
Skelly Oil Company, Tulsa	761,979	796,180
St. Marys Oil & Gas Company, St. Marys, West Virginia	47,238	51,713
Skinner Oil Company, E. W., Saratoga	3,631	4.013
Southern Oil & Production Company, Fort Worth	1,419	1,839
Shankle Newton Oil & Gas Company (6-30-30) Laredo	1,838	1,562
Shankle Newton Oil & Gas Company (9-30-30), Laredo	38,570	32,884
Southern Crude Oil Purchasing Company, Fort Worth	2,166,306	1,666,985
Swearingen Oil Company (9-30-30), San Antonio	2,875	3,508
Sprague Oil Company, Ardmore, Oklahoma	10,250	7,118
Senter, Jr., E. G., Dailas	295	433
Stovall, E. C., & Son, Graham	2,842	3,932
Simms Oil Company, Dallas	926,287	820,475
Southern Production Company, Rockdale	678	509
Schaffner-Wilson, et al, Wichita Falls	1,830	2,777
Slick, Thomas B. (Aug. 16 to Sept. 30-30), Oklahoma City	28,863	35,085
Slick, Thomas B., et al (Aug. 16 to Sept. 30-30), Oklahoma City	7,744	11,068
Sandefer-Atkinson-Daniel Oil Corporation, Breckenridge	3,591	4,869
Saigh, N. A., San Antonio	981	1,197
Supreme Oil Company, Orange	1,859	2,138
Sink, Joel, Corsicana	187	254
Sequoia Oil Company (9-30-30), Fort Worth	153,549	115,668
Sequoia Oil Company (9-30-30), Fort Worth	3,645	2,714
Smith, G. M., and C. E. Ash, Wichita Falls	12,454	16,385
Simpson, O. H., Fort Worth	1,387	1,966
Schaffner, E. N., et al, Cross Plains	954	1,144
Shertzer Brothers, Dewey, Oklahoma	5,720	7,218
Sinclair Oil & Gas Company, Houston	195,020	219,262
Shallow Sand Oil Company, Fort Worth	303	381
S. R. & C. Oil Corporation (6-30-30), San Antonio	78,631	87,668
Schoolfield, R. E., Oklahoma City	242	311
States Oil Corporation, Eastland	33,176	43,290
Simpson-Fell Oil Company, Ardmore, Okla.	9,565	9,270
Seybert Brothers, Mooringsport, La.	1,972	2,870
Sheffield Oil Company, Houston	5,624	6,468
Southwest Royalty Company, Wichita Falls	11,732	13,456
Spring Creek Oil Company, Amarillo	1,430	1,497
Schermerhorn Oil Company, Minneapolis, Minn.	109,009	79,295
Shamrock Oil & Gas Company, Amarillo	172,088	193,161
S & W Oil Company, Amarillo	7,745	6,267
Savoy Oil Company, Tulsa, Okla.	9,648	7,448
Staley & Company, J. I., Wichita Falls	3,434	4,474
Staley, Wynne & Company, Wichita Falls	189,681	237,269
Stekoll, Harry, Tulsa, Okla.	30,344	32,058
Stock, H. I., Cisco	3,173	4,250
Sunray Oil Company, Tulsa, Okla.	106,889	111,485
Superior Oil Producing Company (9-30-30) Tulsa	1,619	2,179
Sheldon, C. P., Electra	9,621	13,284
Smith Slavage Company, Houston	363	417
Speed, C. D., Corsicana	276	375
S. R. & C. Oil Corporation (9-30-30), San Antonio	116,871	114,174
Sinclair Oil & Gas Company, Tulsa, Okla.	101,882	142,269
Shell Petroleum Corporation, St. Louis, Mo.	4,019,486	4,304,543
Saxet Oil Company, Houston	288,540	276,426
Sun Oil Company, Dallas	1,797,545	2,019,621
Spencer, Trustee, H. E., St. Louis, Mo.	763	969
Skia-Tex Petroleum Company, Amarillo	26,886	29,613
Smith, R. E., Houston	13,921	14,440
Sentinel Petroleum Corporation, Chicago, Ill.	188	233
Southern Drilling & Production Co., Bay City, Texas	28,014	33,850
Tillman, J. W., Humble	939	945
Transcontinental Oil Company, Per July 1 to Aug. 20, 1930, Tulsa, Okla.	1,235,064	1,006,319
Thomas, J. A., Burkburnett	1,977	2,550
Tholl Oil Company, Beaumont	3,473	5,202
Texas Consolidated Oil Co., San Francisco, Calif.	8,128	11,104
Texas-Electra Company, The, Newark, Ohio	270	386
Thomas, F. L., San Antonio	25,983	28,321
Towns, M. K., Luling	13,076	13,076
Tidwell, Trustee, R. V., Graham	3,297	4,510
Tillman, J. W. (9-30-30), Humble	80	80
Thornton, E. G. (Apr. 5 to May 2, 1930), Olney	.....	1,455
Texas-Electra Co., The (6-30-30), Newark, Ohio	271	381
Trinity Townsite Company, Dallas	666	906
Texas Fidelity Oil Corp., Fort Worth	6,255	8,711
Teatsorth et al, L., Eastland	1,494	2,085
Thaxton, W. H., Austin	236	321
Travelers Oil Company, Amarillo	12,113	13,242
Texas Petroleum Development Company, Cameron	4,221	5,562
Talbot & Markle, Houston	4,879	5,106
Teci Production Company, The, Breckenride	1,368	1,823
Tex Cal Oil Company, Brownwood	6,351	7,300
Triangle Oil & Gas Company, Rockdale	834	1,083
Tannehille, L. B., Albany	41,095	55,492
Timblin, W. E., Wichita Falls	210	300
Texas Gas Company, Houston	775	659
Teddlie, J. E., Liberty	6,650	7,648
Tower & McKanna, Inc., Wichita Falls	8,949	13,760
Texon Oil & Land Co. of Texas, Fort Worth	92,990	71,247
Trinity Production Company, Wichita Falls	373	526
Treat Oil & Gas Company, E. M., Pittsburgh, Pa.	1,105	1,501
Thomasson & Co., Inc., E. M. (9-30-30), Denver, Colo.	439	614
Thomasson & Co., Inc., E. M. (6-30-30), Denver, Colo.	737	530
Tex Cal Oil Co., Brownwood	6,351	7,300
Thompson, J. E., Humble	599	680
Texas Unity Oil Company, Houston	451	648
Tripplehorn, J. W. & D. R., Fort Worth	2,110	2,757
Thomas, J. Elmer, Fort Worth	144	207
Triangle Petroleum Co., Inc., Fort Worth	685	955
Trimount Petroleum Company, Shreveport, La.	5,645	8,503
Tucker, Art., Graham	2,075	2,895
Traylor-Rutherford Oil Corporation, Refugio	56,933	48,393
Theis Oil Company, Sour Lake	3,162	3,637
Texas Petroleum Company, San Antonio	35,259	35,420
Tegler, F. E., San Antonio	263	315
Taylor-Subley Syndicate, Dallas	2,311	3,304
Timms Oil Corporation, L. W., Amarillo	4,263	5,329
Timms-Fogarty Oil Corporation, Amarillo	558	518
Timms-Robinson Oil Corporation, Amarillo	1,313	1,661
Timms-Dietsch Oil Corporation, Amarillo	5,002	6,423
Tillery Oil Co., Inc., L. J., Beaumont	11,757	13,531
The Texas Company, Houston	4,433,591	5,336,582
Texas Pacific Coal & Oil Company, Thurber	119,991	162,270
Texas Pacific Coal & Oil Company, Thurber	288,345	312,457
Turman Oil Company, Tulsa, Okla.	36,002	50,878
Tidal Oil Company, Tulsa, Okla.	271,259	257,034
Tucker Oil Company, Wichita Falls	79,992	102,482
Taylor-Link Oil Company, Houston	74,594	62,256
Unice & Carpenter (6-30-30), Houston	2,237	2,684
Unice & Carpenter (3-31-30), Houston	2,238	2,770
United Petroleum Company, The (3-30-31), Brownwood	159	176
United Oil Corporation, Wichita Falls	7,564	10,802
Union Oil & Mining Company, Tulsa, Okla.	7,216	9,164
Unity Oil Company, Beaumont	14,281	16,436
Underwood Drilling Co., Ward A Lease, Wichita Falls	2,723	3,704
Underwood Drilling Co., U-C Ward L., Wichita Falls	1,589	2,162
Underwood Drilling Co., Wichita Falls	1,134	1,593
Underwood Drilling Co., Wichita Falls	1,785	2,388
Underwood Drilling Co., Wichita Falls	623	826
University Lease Section 24, San Angelo	12,554	9,970
Unice & Carpenter (9-30-30), Houston	2,415	3,201
Upham Gas Company of Texas (9-30-30), Wichita Falls	5,993	8,249
Upham Gas Company of Texas (6-30-30), Wichita Falls	4,210	6,050
Upland Oil Company, Pampa	16,465	19,696
United Producers Company, Wichita Falls	58,420	84,365
Union Producing Company, Houston	912,917	936,057
Van Wormer, F. E. (6-30-30), Wichita Falls	1,173	1,674
Vacuum Oil Company, Houston	31,165	42,085
Vitek Oil Company, Amarillo	1,177	830
Vigil Oil & Gas Company, Wichita Falls	17,664	23,071
Virginia Oil Ass'n, Inc., Fort Worth	2,844	4,010
Van Wormer, F. E (9-30-30), Wichita Falls	1,325	1,848
Van Cleave Trust, Baltimore, Md.	397	630
Vincent, Receiver, A. G., Waskom	356	439
Venmex Oil Company of Texas, Wichita Falls	37,869	72,360

SKILLED SUPERVISION GUARANTEES THE QUALITY OF GULF PRODUCTS

COASTAL AND PARAFFINE CRUDES
GASOLINE—LUBRICATING OILS
NAPHTHA—GAS—OILS
WAX—PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

GULF REFINING COMPANY

General Sales Offices

PITTSBURGH, PA.

District Sales Offices

New York Boston Philadelphia Louisville Atlanta Houston New Orleans

Ocean Terminals

Boston (Beverly), Mass.
Providence, R. I.
New York Harbor (Bayonne, N. J.)
Jacksonville, Fla.
Port Tampa, Fla.
Mobile (Magazine Point, Ala.)
Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.
New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

B-M-W PRODUCTS for pumping wells
The KEY to LOWER LIFTING COSTS
CORRECTLY DESIGNED .. ECONOMICALLY PRODUCED
REASONABLY PRICED

B-M-W TRIAD
VALVE CUPS
Last Longer Because

The B-M-W TRIAD CUP is entirely different from the ordinary composition cup; the canvas base is heavily impregnated with a rubber compound and the outer layers have an additional impregnation of soft, frictionless METAL. This construction not only gives the cups longer life but a more useful and efficient life—little wear on the working barrel. The TRIAD CUP will not harden in water.

Give the TRIAD CUP a thorough trial—you will find it superior in every respect. For sale at leading supply stores.

BRADFORD MOTOR WORKS INC.
OIL WELL SUPPLIES
BRADFORD, PA. TULSA, OKLA.
EXPORT OFFICE—30 CHURCH ST.—NEW YORK CITY

Everything is safe within the Cyclone Fence. No danger of intruders causing loss by fire. No loss from thefts.

Cyclone Fence is built so that top rail will not sag, nor posts lean, nor the fabric lose its rigid strength.

Every part is made of durable copper-steel, heavily galvanized. Fabric galvanized by the "Galv-after" method developed by Cyclone. No chance for rust to start.

Cyclone Fence is erected by our own trained men.

Service everywhere. Write for information.

CYCLONE FENCE COMPANY
Subsidiary of United States Steel Corporation
Works and Offices: Fort Worth.
Direct Factory Branches and Warehouses: Houston, Dallas, Tulsa.
Also Sales Offices: New Orleans, Shreveport

Cyclone Fence
REG. U.S. PAT. OFF.

All chain link fence is not Cyclone. This name plate identifies the genuine Cyclone Fence

© C. F. Co. 1930

Name and Address	Barrels	Value
Woodruff Development Company, Inc. (6-30-30), Cleveland, Ohio	924	932
Woodley Petroleum Company, period Jan., Feb., March, Apr. and 1st half of May, Shreveport, La.	1,468	1,786
Wilder, Jack H., Rice	572	773
Whitfield, B. V. (6-30-30), Oklahoma City, Okla.	1,109	1,557
Wise & Jackson (Sept. 1929, to Mar. 30-30), Graham	1,565	2,295
Wilson, W. I. (6-30-30), Electra	679	982
Wilson & Swain, (6-30-30), Woodson	3,360	4,174
Wilson & Swain (30-31-30), Woodson	3,923	3,363
Washoma Petroleum Company (30-31-30), Enid, Okla.	15,011	1,546
Washoma Petroleum Company (6-30-30), Enid, Okla.	23,762	25,356
Webb Oil Company, Humble	4,435	5,100
Woods & Bennet, Humble	6,346	7,406
Worth Petroleum Company, Fort Worth	4,320	5,616
Wilson, W. I. (9-30-30), Electra	845	1,220
Westbrook-Production Co., R. A., Fort Worth	36,690	27,474
Wolfe, A. T., Wichita Falls	5,581	7,738
Wahpoo Oil Company, Rockdale	1,082	1,453
Weiler et al, J. G., Cross Plains	1,643	2,377
Warner Oil Company (9-30-30), Pampa	9,360	12,258
Warner Oil Company ((6-30-30),Pampa	11,437	14,411
Waggoner Estate, W. T., Fort Worth	2,049	2,716
Witcher, Guardian, Mrs. Annie L., Wichita Falls	3,278	4,699
Wilbarger Oil Company, Wichita Falls	1,622	1,938
Wichita Production Company, Wichita Falls	11,602	15,959
West Texas Petroleum Corporation, San Angelo	7,130	4,990
Wills Oil Company, Rockdale	1,178	1,543
Whitehill Oil Corporation, Tulsa, Okla.	4,213	5,996
Wheelock & Collins, Corsicana	8,490	11,719
West Production Company, Houston	14,521	17,622
Woodley Petroleum Company, Shreveport, La.	101,108	136,819
Weaver & Pois, Wichita Falls	2,316	3,134
Wallace, Dr. Chas. & wife, Wichita Falls	48,929	70,055
Wolf, D. L., Olney	6,531	7,918
Wilson & Swain (9-30-30), Woodson	1,360	1,913
Wakefield et al, M. E., Cross Plains	167	239
Witherspoon Oil Co. & C. L. Witherspoon, San Antonio	31,023	31,980
Weldon Oil Company, Saratoga	11,499	11,066
Watts, C. D., Moran	763	778
Walker, A. C., Albany	2,216	2,959
Worth Oil Company, Wichita Falls	4,222	5,202
Westheimer & Daube, Ardmore, Okla.	23,096	33,080
Williams, John H., Dallas	4,816	6,602
Why Not Oil Company, Mexia	5,136	7,136
Wo-Mac Oil Company, Wichita Falls	10,828	15,242
Whiteside, J. E., Brownwood	297	348
Woody, W. C., Wichita Falls	5,756	8,178
White & Duncan, Wichita Falls	5,437	7,490
Weekley Oil Corporation, Fort Worth	37,399	31,884
Witcher et al, W. C., Wichita Falls	494	707
Walker Estate, D. B., Fort Worth	205	243
Woodson Oil Company, Woodson	772	980
Wilcox Oil & Gas Company, H. F., Tulsa, Okla.	368,746	472,088
Warner-Quinlan Co. of Texas, Houston	234,940	189,589
Weister, E. P., Tulsa, Okla.	4,445	5,926
Watchron, Robert, Oklahoma City, Okla.	2,169	2,538
Walton, Blair & Schaffke, Electra	3,313	4,936
White, James H., Wichita Falls	7,915	10,967
Wilson-Broach Company, The, Beaumont	11,326	13,025
Webb, J. R., Corsicana	197	257
Webb, J. R., & J. H. Bryant, Corsicana	220	198
Woodburn Oil Corporation, Dallas	3,221	4,408
Wise & Porterfield, Graham	4,364	5,933
Ward Oil Corporation, Ardmore, Okla.	121,477	93,061
Wood, Benton, Lesh & McCall, Nocona	4,177	3,755
Wentz-Oil Division, L. H., Ponca City, Okla.	5,883	4,918
Waggoner Refining Company, Inc. (9-30-30), Electra	227,720	295,747
Waggoner Refining Company, Inc. (3-31-30), Electra	296,826	377,641
Wilkins, L. A., Burkburnett	3,652	4,725
Wise & Jackson, Sapulpa, Okla.	5,703	7,553
Whaley Company, Inc., Fort Worth	2,384	3,179
World Oil Company et al, Fort Worth	8,186	6,921
Wilson Estate et al, Lee, Wichita Falls	3,999	5,507
Wills, O. C., Burkburnett	1,078	1,412
Waggoner & C. F. Kolf, E. P., Electra	5,066	6,710
Whitefield, B. V., Oklahoma City, Okla.	570	703
Weiler, H. J., Wichita Falls	269	284
Wilson Drilling Company, Wichita Falls	15,476	21,960
West, J. H., Lemon Grove, Calif.	9,750	13,312
West, C. K. Breckenridge	3,824	5,075
Woods, C. D. & C. C., Ranger	615	790
Woodruff Development Company, Inc. (9-30-30), Cleveland, Ohio	582	590
Wallace & Emrick, Minerva	236	309
Wallace & Davis, Minerva	302	393
Wallace & Davis, Minerva	224	285
Young Brothers & Alexander, Inc., Fort Worth	6,694	8,185
York Petroleum Company, Stamford	55	71
Yount-Lee Oil Company, Beaumont	1,670,137	1,806,753
Zadie Belle Oil Company, Fort Worth	454	633
	77,506,340	82,811,993

SPECIFICATIONS for

LABORATORY ANALYSIS		WHAT IT MEANS TO YOUR MOTOR
Initial Boiling Point	110 Maximum	Easy starting
% distilled at 221° Fahr. % distilled at 284° Fahr. % recovery	25 Minimum 52 Minimum 97	More power, long burning stroke
End Point	400	Complete vaporization and therefore complete combustion
Doctor Test	O K	Clean odor
Corrosion Test	O K	No choking of gasoline line
Color	Plus 25	Clean, highly refined
Sulphur	1/10 of one per cent Max.	No pitting of valves
Gum Test	O K	No resinous precipitate to cause clogging of carburetor jets or sticking of valves

YOU may not be interested in the technical description or laboratory analysis of Humble Flashlike Gasoline, but every one who drives a car is interested in how the product acts in the motor.

The above specifications of Humble Flashlike Gasoline show the laboratory analysis and its explanation in every-day terms. Every one agrees that easy starting is much to be desired; also, to get your money's worth from the gasoline you buy, it must burn completely. Humble Flashlike Gasoline—with its lightest fractions vaporizing at 110° Fahr. maximum, evenly proportioned up to an "end point" of 400° Fahr. (which is the temperature range at which the average motor operates most efficiently as well as most economically) insures complete vaporization and, therefore, complete burning and full power.

Humble Flashlike Gasoline must pass a very rigid corrosion test. Corrosion, you know, often causes choked gasoline lines. Humble Flashlike Gasoline is clean, highly refined, and has no offensive odor. Its sulphur test must not show more than one-tenth of one percent, thus safeguarding the valves in your motor from danger of pitting. And a most rigid gum test insures that there is no resinous precipitate in Humble Flashlike Gasoline to clog the carburetor jets or to cause sticky valves.

It will pay you to study the above specifications. Make them the basis on which you buy your gasoline.

HUMBLE OIL & REFINING COMPANY
HOUSTON, TEXAS

HUMBLE OILS GASOLINE

WICO-
THE DEPENDABLE MAGNETO

Week after week, month after month, WICO Magnetos quietly deliver the fat hot spark that means regular service and freedom from motor breakdowns.

Dependable service is further assured by a direct factory branch at Tulsa.

WICO ELECTRIC COMPANY
Springfield, Massachusetts
Factory Branch: 121 West 8th St., Tulsa, Okla.

WICO MAGNETOS

New Equipment for the Field

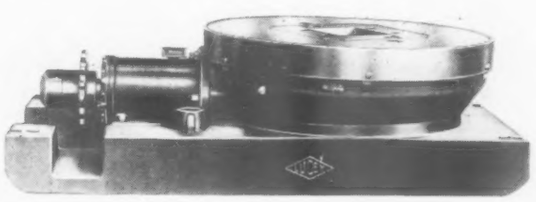
Machinery - Tools - Catalogs - Books

Oil Bath Rotary

LUCEY PRODUCTS CORPORATION

Lucey Products Corporation, Tulsa, is marketing the new Type A-14,000 fully enclosed oil bath rotary.

The table and base are electric cast steel, electrically annealed. The outside diameter of the table is 58¾ inches while the largest opening through it is 26 inches. The base is of one-piece unit construction, of which the box type skids are an integral part. An annular steel ring is mounted on the base, completely shrouding the outer diameter of the table. Cones run in heat treated alloy steel race rings which are removable from both base and table, and interchange, one with the other.



New Lucey Rotary

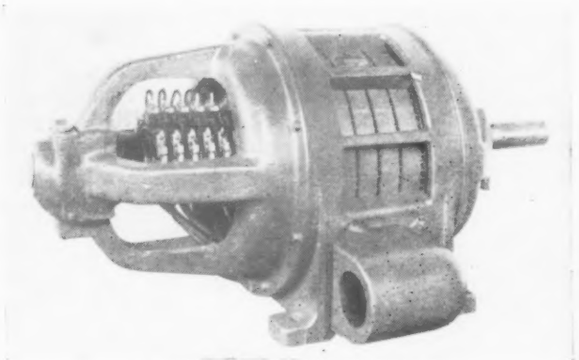
The lower hold down ring is of two-piece construction; the thrust ring, and the adjusting nut. The thrust ring is sidably keyed in place on the lower protrusion of the table, and has its bearing on the machined and ground face of the base. The adjusting nut is an annular ring threaded to fit the lower protrusion of the table. It is locked in position after adjustment is obtained by means of a locking dog, which seats itself in the thrust ring.

The thrust ring runs in a bath of oil and in combination with a felt insert in the machined face of the base, forms a seal to prevent the entrance of foreign matter as well as the loss of oil.

Another feature of the rotary is the double radial bearing for absorbing side thrusts of the machine when drilling. These radial bearings are so placed that one is above, and the other is below the main bearing of the rotary. The upper and lower radial bearing have a combined bearing surface of more than 1050 square inches. The upper bearing surface, which is the larger of the two, is above the center line of the pinion, and near the top of the table where side thrusts are generated.

Pinion shaft is an alloy steel forging six inches in diameter, machined and heat treated. Pinion shaft bearings are SKF self-aligning roller type. The bearing boxes are adjustable with respect to the pitch line of ring gear and pinion. The pinion shaft is locked from turning in either direction by throwing a single lever. This lever is located on the opposite side of the rotary from the driller, and does not interfere with stacking drill pipe. A locking device is also provided to permit the master bushing to be locked in the rotary table, and to prevent slips being set in if master bushing is unlocked.

Overall length of base is 106½ inches; width of base 48 inches; height overall 29 inches; height above skids 18 inches; net weight 11,545 pounds.



General Electric Oil Well Motor

Two-Speed Pumping Motor

GENERAL ELECTRIC COMPANY

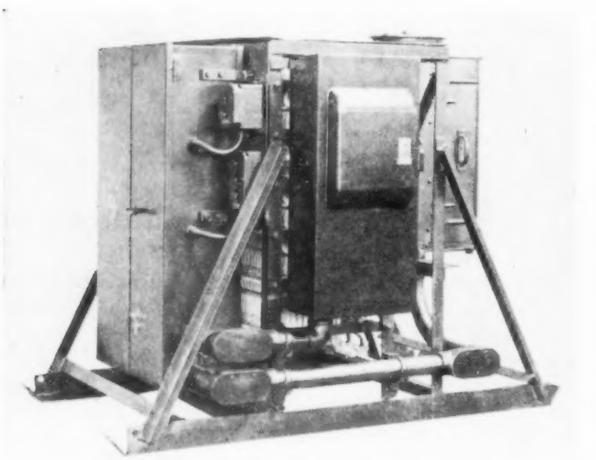
General Electric Company has extended its line of type MTO two-speed oil-well pumping, motors to include a new and larger rating, 75/35 horsepower motor. The other ratings already available and in use are 35/15, 50/20, and 55/25 horsepower. The new 75/35 horsepower motor has been designed with all the characteristics of the other motors of this line. It is designed for 440 volts and suitable for operation on three-phase circuits, either 50 or 60 cycles. It operates on a six-pole connection on high speed and a 12-pole connection on low speed, giving synchronous speeds of 1200/600 r.p.m. on 60 cycles and 1000/500 r.p.m. on 50 cycles.

The low speed connection is used almost exclusively for

G-E Auxiliary Oil Well Controller

individual well pumping. The high speed connection is used for all other service work at the well, such as pulling rods and tubing, bailing, etc. The motor is of the wound-rotor type with six collector rings, thus enabling speed variation to be obtained on both the high-speed and low-speed connections, using the same control equipment in either case.

One of the special features of the entire line, also provided on the new motor, is the high maximum running torque on the high speed connection, which is approximately 450 to 500 per cent of full load torque. This high torque enables the motor to develop the power necessary



General Electric Pumping Controller

to relieve the well readily of emergency conditions. It is backed up by a high thermal capacity in the motor to give it the ability to handle heavy overloads without overheating.

Another feature which is provided on the entire line of these motors is the extra binding wire on the rotor to make its operation safe at a speed of 2400 r.p.m., thus protecting the motor against high coasting speeds when lowering tubing into the well.

The motor may be provided with enclosed type of collectors for operation in explosive gases.

Standard motor frame construction and sleeve bearings are used, the latter effectively sealed against the entrance of foreign matter.

As is the standard practice on this line of motors, the control equipment is completely assembled on a welded angle iron framework and wired complete at the factory before shipment, so that in making an installation it is necessary for the user to make only a few connections between the motor, the control unit and the power circuit. All primary wiring is run in conduit in accordance with the best standards. The framework is provided with skids so that it may be readily moved from one location to another.

The control equipment includes a cam-operated, eight-point controller which may be either of the ordinary enclosed type of construction or, especially protected by a class BM enclosure for use in explosive gases. The primary pole changing and circuit breaker contactors are mounted on a panel and enclosed in a sheet-iron case. If a protected equipment is desired, this panel is supplied oil immersed.

A suitable enclosed entrance switch with fuses is provided on the equipment where no protection against gas is necessary. An oil-immersed switch is used on the protected equipments.

The resistor consists of cast alloy grids suitably mounted on the framework and designed for oil-well pumping and pulling service. The alloy used for the grids is very tough and unusually free from breakage, even with the rough handling the equipment gets in the oil fields. A convenient terminal board is provided for the leads extending from the collector rings on the motor.

Change from high speed to low speed on the two-speed motors is obtained by push button control of the contactors on the panel. Variation of speed for service requirements is obtained by rope wheel operation of the cam operated controller, which gives both "forward" and "reverse" operation.

On the high-speed connection, protection against grounds, short-circuits and stalling is obtained by fuses in the entrance switch. If an oil immersed switch is used for protection against gas, an overload trip takes the place of fuses. On the low-speed connection, a temperature overload relay in series with the fuses gives suitable overload protection under any pumping conditions for which it may be set.

The new motor has the capacity to handle cable tool drilling, and can be readily adapted for that purpose by providing it with an auxiliary control unit to use in conjunction with its main control.

Lufkin Catalog

Lufkin Foundry & Machine Company, Lufkin, Texas, has published a catalog covering its oil field equipment, announced as the most complete catalog relating to the application of the reduction gear to oil field pumping and drilling, yet issued. The compilers of this catalog have endeavored to make of it an engineering handbook for the production manager. Besides its description of products manufactured by the company, it is replete with valuable engineering information.

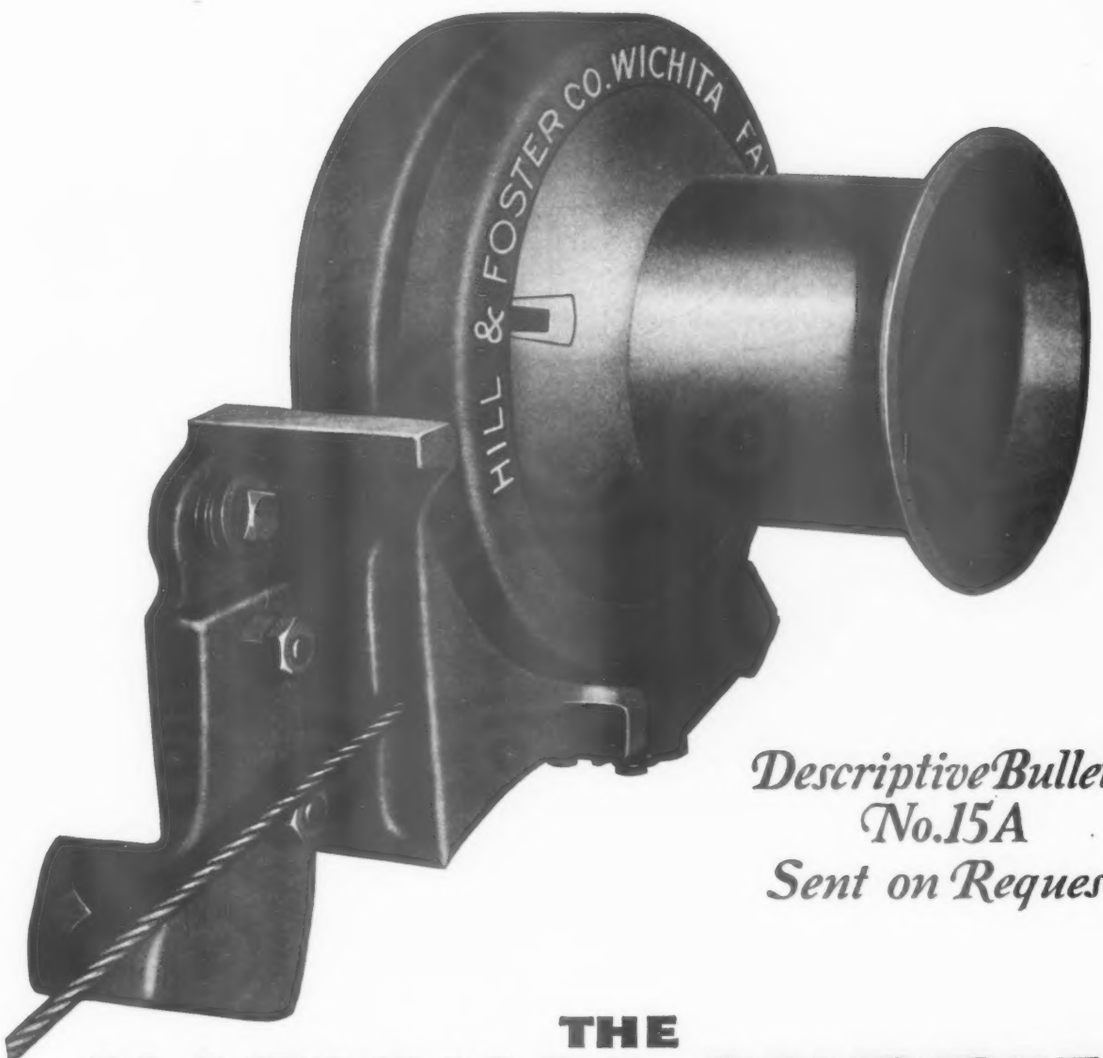
Blue print setting plans and hook-ups of all types of unit applications are set forth attractively in the catalog with the particular advantages of each application fully explained. Of interest to engineers is that part of the book devoted to tests made by Lufkin Foundry & Machine Company in co-operation with the Texas A. & M. College of the worm gear and Herringbone gear, both products of the company.

The catalog contains a "Unit Selection" guide helpful to those in remote fields in the selection of Lufkin units for their particular field condition. A sepia section of the catalog gives a pictorial history of the Lufkin unit. This section depicts the growth of the use of the Lufkin unit from the original unit placed in the Gulf Coast seven years ago to the 1700 units now in use throughout the fields of the world.

The company has used its private cable code throughout the catalog along with giving complete specifications of all the equipment listed in order to make foreign ordering simplified.

A copy of this 120-page catalog will be gladly mailed to interested oil men anywhere upon request to any branch office or to the factory at Lufkin, Texas.

HILL & FOSTER
AUTOMATIC CATHEAD



Descriptive Bulletin No. 15A Sent on Request

THE NATIONAL SUPPLY COMPANIES

Manufacturers and Supply Dealers Notes

Oil Center Tool Company, through Arthur J. Penick, president, Houston, announces the stocking of Republic Supply Company's Pettus district store with a complete line of high pressure fittings for the convenience of users of these products. He has returned from a trip through southeastern New Mexico and Southwest Texas where his company has been installing several new products which will shortly be announced.

Fusion Welding Corporation, 103 Street and Torrence Avenue, Chicago, has published a 12-page illustrated catalog on welding accessories. It serves to supply the need for a handy guide for those requisitioning or ordering electric arc welding accessories and supplies. A complete line of these items is illustrated and described. A price list on items shown is carried. Copies may be had by writing the company's address given above.

Southwark Foundry & Machine Company, designers and builders of hydraulic machinery, power tools and special equipment, Philadelphia, has recently published a pictorial catalog, entitled "An Album of Engineering Achievement." More than 250 photographs used in this 64-page catalog tell the story of this company's products and their making. Most of the illustrations are from working photographs, showing interior operations of the company. A copy is available upon request to the company's headquarters office or to the branches, Sweetland building, Cleveland, or Fisher building, Chicago.

International Harvester Company has issued a very attractive booklet entitled "International Trail," which gives a graphic outline in pictures and story the day's work of the International truck under conditions in various regions. The company will forward a copy of this booklet upon request.

Oilfield Specialty Company, 401 Velasco Street, Houston, has recently been appointed as exclusive distributors on the Ramhead piston for slush pumps in Texas, New Mexico and South Louisiana, by Alamo Iron Works, San Antonio, the manufacturers. The Ramhead piston has, during the past year, undergone a number of improvements which were followed by rigid field tests and is now being sold throughout the world where rotary drilling is under way.

Vickers Machine Works has established a manufacturing and service division at Oklahoma City, located in the heart of the producing area of the Oklahoma City field. Since opening this plant the company has found it advisable to add a welding shop and now has plans for another addition. This company formerly manufactured its patented overshot and other production specialties at Smackover, Arkansas, but removal to Oklahoma City has centered these activities there.

The accompanying picture shows Bob Watkins, Baash-Ross Tool Company, left; Lynn Park, Houston Oil Field Materials Company, agents for Baash-Ross Company in the Houston territory; and A. V. Cox, sales manager, Mid-Continent division for Baash-Ross Company. Following the exposition at Tulsa they flew in this Curtis-Robin plane over the Mid-Continent territory and to Houston. Cox, owner of the plane, won considerable recognition as an aviator during the World War.

FRANK MASON

Shaffer Tool Works, manufacturers of hi-pressure control equipment and other oilfield specialties, announces the opening of a downtown office in the Subway Terminal building, 417 South Hill Street, Los Angeles.

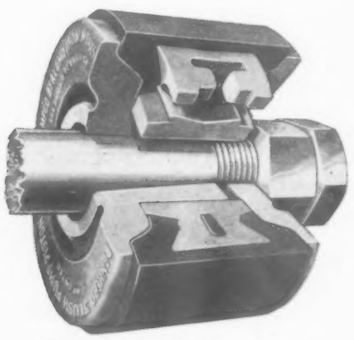
Frank Mason, Los Angeles representative, formerly superintendent of the Brea plant, will make his headquarters in the new office. He will be assisted by Norman LeRoy who also received his training at Brea.

Several new articles have been added to the Shaffer line of oilfield tools.

Emsco Derrick & Equipment Company announced its decision to make a division in the sales department between derricks and machinery, effective November 1. W. G. Fitzpatrick was made sales manager of the derrick division, to continue with headquarters at Dallas. George W. Walton was made sales manager of the machinery division, transferring headquarters from Tulsa to Dallas.

Don D. Angle Welders Supply Company of Los Angeles has recently been appointed exclusive Pacific Coast distributor for Alexander Milburn Company's line of Acetylene welding and cutting equipment.

Ramhead
SLUSH PUMP PISTONS



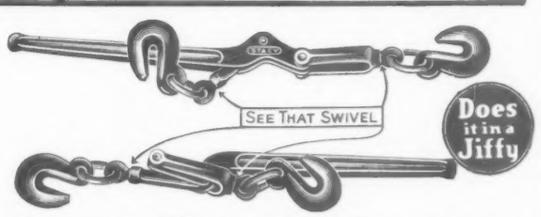
Ramheads Make a Good Pump Better

Their improved design with a minimum of constant friction on liner gives smooth regular pump service. There is less friction, less slippage and no metal contact with liners . . . consequently, longer life and increased efficiency. Ramhead Pistons are simple, foolproof and easy to install. Order a set and test them for yourself.

Alamo Iron Works
SAN ANTONIO, TEXAS

"BOOMERS"

Stacy Swivel Load Binders



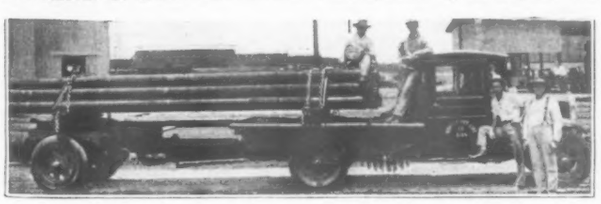
A Handy Time-Saving Tool

Stacy Swivel Load Binders have many practical Oil Field uses. They make hauling safe and save time and work by binding any load quickly, easily, securely. No load is too big or too heavy for this indispensable tool. Photograph below shows how the Stacy Binder holds a pipe welding clamp firm. Made in 5 sizes, weighing from 2 lbs. to 14 lbs. for each single tool, not for a pair as commonly quoted, sold and used.

Used in Every Oil Field in the World

Just ask your jobber or export agent for Stacy Load Binders in the size you want. He'll do the rest. I also sell chains. Any weight, size or length with hooks or as desired.

EUGENE C. STACY, Manufacturer, Tiffin, Ohio., U.S.A.



Saves money on jobs like this

IS your tank car washing costing you more than you think it ought to? If it is, investigate this simple Oakite method that so many other concerns are finding profitable to use in washing cars painted white, aluminum or any other color.

Simply apply the proper Oakite material the Oakite Service Man will recommend, using either spray equipment or the Oakite flow-on method. Grease, dirt and other foreign matter are thoroughly loosened, so that a light swabbing and rinse remove them completely. Surfaces dry clean and film-free. Paint is brighter, colors show up like new. And, when a regular Oakite cleaning schedule is adhered to, repainting is needed less frequently.

Complete information on this money-saving Oakite method is available through the near-by Oakite representative. A post card brings him to your plant.

Oakite Service Men, cleaning specialists, are located in the principal industrial centers of the U. S. and Canada

Manufactured only by

OAKITE PRODUCTS, INC., 38G Thames St., NEW YORK

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Industrial Cleaning Materials and Methods

A
TIME SAVER
ON ANY LEASE

EXPERIENCED OIL MEN who appreciate the value of hours and days saved in drilling are quick to realize the advantage of using the APPLEMAN GUMBO BIT . . . the time it saves will in turn save money in drilling costs.

SPEED
FEATURES

Self-Sharpening Blades are attained by hard facing in the concave shaped blades permitting wear on the back to retain cutting edges.

Straight Water Courses lead directly to the cutting edge, insuring rapid mixing and breaking up of cuttings to be quickly washed away in solution.

Sidewall Cutting is attained by the self-sharpening blades and their special design. This gives a clean and well-prepared sidewall "bored to size."

Write for
Complete Information

B. K. APPLEMAN
BEAUMONT, TEXAS

Squeaks from the Bull Wheel

A man was spending his vacation at a camp. One day he asked a farmer who resided nearby, what he did with such an enormous peach crop. The farmer replied, "Well, we eat what we can, and what we can't eat we can."

"We do the same thing, brother," said the questioner. "We sell what we can sell, and what we can't sell we cancel."

You've no need to light a night-light
On a light night like tonight.
For a night's light's a slight-light.
And tonight's a night that's light.
When a night's like tonight's light
It is really not quite right
To light night-lights with their slight lights.
On a light night like tonight.

"Shure, Murphy," said Pat, "bettin's an awful risk."

"Shure, Pat," said Murphy, "but why?"

"Well, Castigan bet me a bob to a tanner that I couldn't swallow an egg without breaking the shell of it!"

"And did you lose the bet?"

"No, but if I jump about I'll break it and cut me inside wid the shell; and if I kape quiet it'll hatch and I'll have a white leghorn rooster to dale with."

"How old are you?" inquired the visitor of his host's little son.

"That is a difficult question," answered the infant prodigy. "The latest personal survey available shows my psychological age to be 12, my moral age 4, anatomical age 7, and my physiological age 6. I suppose, however, that you refer to my chronological age which is 8. That is so old-fashioned that I seldom think of it any more."

Come on, take a bath and get cleaned up. I'll get you a date.

Yeh, and suppose you don't get the date.

"How did Oscar happen to lose control of his car at the railroad crossing?"

"He's the kind of a fellow who always drops everything when the whistle blows."

Old Gentleman (in the street car): "Has any one here lost a roll of bills with an elastic around them?"

"Yes, I have," cried a dozen riders.

Old Gentleman (calmly): "Well, I just found the elastic."

The day before she was to be married the old negro servant came to her mistress and intrusted her savings to her keeping.

"Why should I keep it? I thought you were going to get married," said the mistress.

"So I is, Missus, but do you s'pose I'd keep all dis money in de house wid dat strange nigger?"

A revivalist said to the congregation: "There is a man among us who is flirting with another man's wife. Unless he puts $5 in the collection box, his name will be read from the pulpit."

When the collection box came in there were six $5 bills in it, and a $2 bill with a note pinned to it, saying: "This is all the cash I have, but will send the other $3 Wednesday."

"Beatrice," said Mrs. B. to her daughter, "if Harold asks you to be his wife tonight, tell him to speak to me."

Beatrice nodded, and then said: "And if he doesn't ask, mother?"

"In that case," said her mother, "tell him I want to speak to him."

A man pinned underneath his car after an auto accident was being questioned by a policeman. "Married?"

"No," said the man, "this is the worst fix I was ever in."

He looked up over the top of his paper with anything but a happy expression.

"Madam," he said, "will you please get off my foot?"

"Put your foot where it belongs," she replied shortly.

"Don't tempt me, madam, don't tempt me," he countered.

Little Mary was left to fix lunch and when the mother returned with a friend she noticed Mary had the tea strained. "Did you find the lost strainer?" mother asked.

"No, Mother, I couldn't, so I used the fly swatter," Mary replied.

Mother nearly swooned, so Mary hastily added: "Don't get excited, mother, I used the old one."

"You boys of today want too much money. Do you know what I was getting when I married your aunt?"

"No; and I'll bet you didn't either."

Do you see that young man standing over there next to the flivver with the golf pants on?

I see the young fellow, all right, but where is the flivver with the golf pants on?

Haven't I always given you my salary check the first of every month?

Yes, but you never told me you got paid on the first and 15th, you embezzler!

It was on a Fourth Avenue car that a buxom woman was standing in the aisle hanging to a strap. In front of her sat a rather cantankerous looking man, apparently absorbed in a newspaper. The car stopped suddenly and she trod sharply on his foot.

M-S-A *Combination* HOSE MASK

PERMISSIBLE
HOSE MASK
DEPARTMENT OF COMMERCE
BUREAU OF MINES
APPROVAL NO. 1901
ISSUED TO THE
MINE SAFETY APPLIANCES CO.
Pittsburgh, Pennsylvania, U. S. A.
Appliance is approved only when hose, harness, and blower bear approval No. BM-1901, also face piece assembly BM-1901 or 1901E. The length of the hose must not exceed 150 feet
In making renewals or repairs, parts identical with those furnished by the manufacturer under the original approval shall be maintained.
CAUTION
1. A life line shall be attached securely to the safety harness and held by two attendants when the mask is used for entering oil tanks, sewers and similar confined spaces, so that the wearer can be removed in case of accident or emergency.
2. Persons wearing hose masks should not enter pla where the hose or life line may be entangled and fouled. Atte ants must help in keeping these clear.
3. The hose mask will give respiratory protection in at pheres containing hydrocyanic acid gas, but it is not safe counter high concentrations because the gas is absorbed th the unprotected skin of the body and in that manner will pro duce poisoning.
4. The blower must be operated continuously during use of the mask.

This M-S-A Fresh Air Mask Officially Approved by both the United States Bureau of Mines and the American Gas Association.

DOUBLE CHECKED *for the Protection of Your Workmen!*

When you specify M-S-A *Combination* HOSE MASKS for men in your employ who must enter and work in High Concentrations of Gas or Oxygen Deficient Atmospheres, you have the Assurance that your workmen are provided with the Utmost in Protection . . . with Masks that meet the Rigid Specifications of These Recognized Authorities. Note particularly that this mask is approved by the Government for safe use with as much as 150 feet of hose.

The M-S-A Combination Hose Mask Combines a Leather Safety Belt as the Supporting Harness with D Ring for attaching a Life Line.

Hundreds of Public Utility Organizations, Oil and Chemical Companies as well as Municipal Authorities, generally, have standardized on M-S-A Hose Masks for their employees who must enter and work in dangerous atmospheres.

Send today for complete information on the various types of M-S-A Hose Masks which we manufacture. Use the coupon for convenience.

Mine Safety Appliances Co.

Braddock, Thomas and Meade Sts., Pittsburgh, Pa.

"Everything for Mine and Industrial Safety"

MINE SAFETY APPLIANCES CO.
PITTSBURGH, PENNA.

Without obligation, please send me copy of Bulletin No. 171 on M-S-A HOSE MASKS.

My Name _____

Position _____

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Wyatt Metal & Boiler Works.....
T. T. Word Supply Co.....

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Youngstown Sheet & Tube Company..

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Day and night, dull days or bright, wind or not, cold or hot—the Weather Vane stands on duty.

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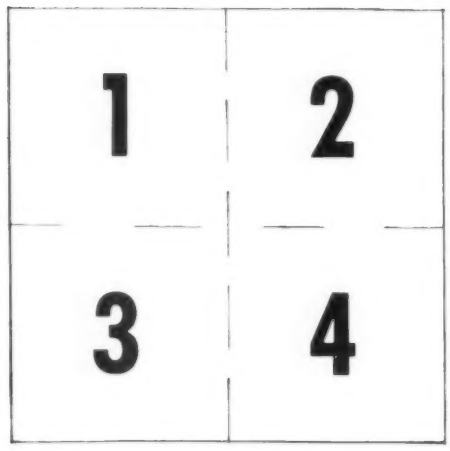

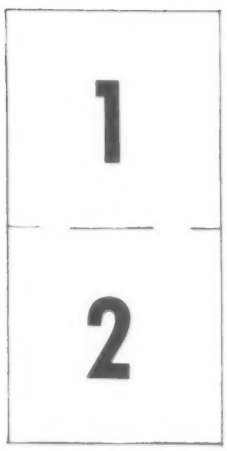

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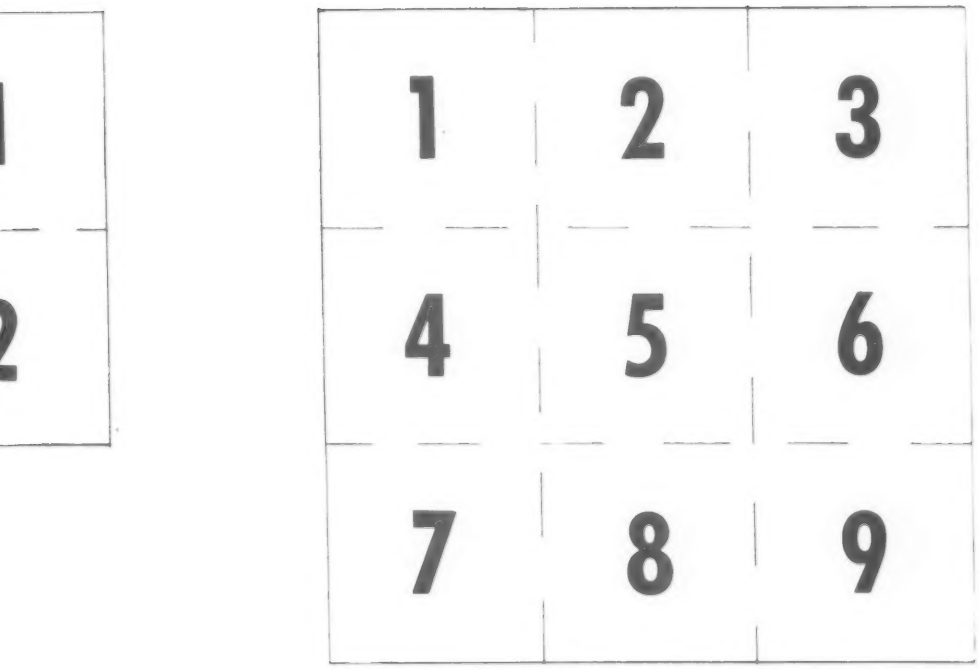

Wells Drilled or Drilling in Nuevo Leon, as of November 15, 1930

Company, well, location, history, interesting details, and results.

Control de Administracion del Petroleo Nacionales . . . . . Ferronales 205

North end of South Aldamas Anticline . . No important showings in well 1502 feet deep.

Located about five kilometers west of Aldamas on the Monterrey-Matamoros National Railways right-of-way. The test was abandoned in 1930, following mechanical difficulties. Casing was broken and two strings of tools were lost in the hole.

Frick et al . . . . . Santa Monica No. 1

South end of South Aldamas Anticline. . . Shut down in early November, 1930; oil and gas shows reported

Early in November, 1930, this well was reported shut down at 2000 feet. Oil and gas showings were reported from 1200 feet down.

The Ohio Mexico Oil Corporation . . . . . No. 1

On North Aldamas Anticline. . . . Trying to sidetrack at 2500 feet recently.

This well is being drilled by the "Ohio-Mex" on Corona (Shell) acreage. Casing parted at 2500 feet, and efforts are being made to sidetrack lost casing.

Coursen & Matches . . . . . Aldamas No. 1

On east flank of North Aldamas Anticline. . . . Shallow test, drilled in 1925.

Located in Lot 23, Municipalidad de Aldamas, about 12 miles north of the railroad station. The well was spudded in May, 1925, but only reached the depth of 240 feet. Wood was used for fuel. The surface outcrop is Eocene sandstone of Indio age.

Compania de Petroleo Mercedes, S. A. . . . . Chapa No. 1

In Cerralvo area, 10 miles northeast of town of that name . . . Drilling early in November, 1930, below 1500 feet.

Location of the well is 4½ miles west of the town of General Trevino and seven miles south of Agualeguas, along the faulted and folded zone west of Aldamas. The well was spudded September 26, 1930, and at the beginning of November, 1930, was drilling at 1550 feet. The surface formation is Midway. In the Municipio of Agualeguas, in which this test is located, Compania de Petroleo Mercedes has approximately 47,000 hectaras (around 120,000 acres).

Tampico syndicate . . . . . Popote No. 1

Ten miles north of Linares, south of Monterrey. . Abandoned at 3400 feet.

This well was drilled in 1924 by a combination of Tampico companies. It started in metamorphosed Cretaceous shales and ended in the same.

Control de Administracion del Petroleo Nacionales . . . . . Camaron No. 1

On north end of Escalera-Aldamas Terrace. . . Drilled to 4506 feet, and had oil and gas shows.

Location of this well was on the right-of-way of the National Railway of Mexico, near Camaron station, south of Laredo on the Laredo-Monterrey line. The actual drilling was done in 1930 under contract by Luis Acuna Drilling Company. The formation at the surface is Papagallos (or Papagayos) shale, of Cretaceous age. Shows of both oil and gas were encountered in blue shale (Papagallos) at 2110 feet. Ten-inch casing was cemented at 1750 feet, and 6⅝-inch casing at 3309 feet. Early in November, 1930, the well had total depth of 4506 feet, and although some reports showed it as standing, others indicated it had been definitely abandoned. At that depth it was in lime (reported as being probably the Edwards).

Wells Drilled or Drilling in Tamaulipas, as of November 15, 1930

Compania Fronteriza de Petroleo, S. A. . . . . Santa Anita Ranch No. 1

About 6 miles southeast of Ochoa structure and town of Ochoa; 17 miles south of Camargo. . . Abandoned 3474 feet; no show.

Location of this well was in the northwest corner of Lot 28, Camargo, between Santa Anita and San Isidro ranches. (See map.) It was drilled with rotary equipment, being spudded in July, 1925, and it was finally abandoned at 3474 feet. No oil or gas showings were encountered. The formation at the surface was Guyedan (Oligocene), equivalent to Catahoula, and the test was in Cook Mountain (Eocene) when abandoned.

On April 13, 1926, H. D. Dana, Laredo, made the following report, which was apparently authentic: "The Fronteriza company is said to hold about 65,000 hectaras (roughly 162,000 acres) of land in the district in 13 different porciones. The test is 800 feet deep in hard blue, calcareous sand. The formation is extremely hard, but most of the hole is made with a fish-tail bit. Rat hole is first made with a four-inch bit. This is followed with a 9⅞-inch bit and is then again reamed with a 13¾-inch bit. Frequent round trips are necessary. Eight-inch casing will be run and cemented somewhere between 1000 and 1500 feet, in compliance with the law in regard to this matter."

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Guerrero
Jn. Juan de Sabinas
Mopguiz
Mexican R.R.
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Progreso
COAHUILA
LA LAJA
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Jan Buena Ventura
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CRETACEOUS
SALADO ARCH
ESCALERA-ALDAMAS TERRACE
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MOUNTAINS
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LA LAJA
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BARRETA
LAREDO
Hidalgo
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Rio Escondido
Rio San Juan
Rio Salinas
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ADV

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Cosden Oil Company is said to have been interested in this well at one time. The property on which it was located now belongs to Compania de Petroleo Mercedes (subsidiary of Standard Oil Company of New Jersey). There is probably east-west faulting present.

Control de Administracion del Petroleo Nacionales . . . . . Nacionales 201

On Ochoa (or Pescada) Structure . . Drilled to 3605 feet. Produced some 40.5 gravity oil.

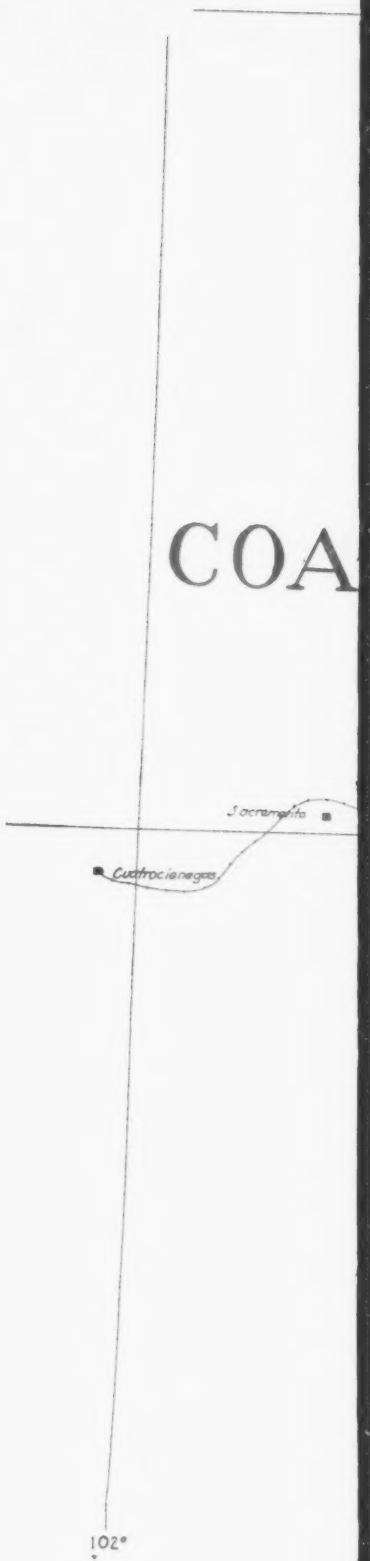
Control de Administracion del Petroleo Nacionales (Administrative Control of National Petroleum) is a Mexican company in which the federal government owns controlling interest, and which drills along national railroads, river banks, frontier zones, and other lands classed under the National Petroleum Reserve. This well, No. 201, drilled in 1927, is located on the south bank of the San Juan River, north of the station of Ochoa, about 25 kilometers east of Aldamas, and 21 miles south of Roma, Texas. It was the first well drilled by the "Control" on the Ochoa structure, and it is the only oil well in Northern Mexico to have shown possibilities of commercial production.

Located about 1000 feet west of the crest of the structure, about 100 feet from the top contour, it was drilled to 3605 feet. All formations penetrated were of Eocene age. The well started in the upper part of the Fayette and drilled to the bottom of or possibly entirely through the Cook Mountain. The formation thicknesses were as follows:

Surface to 1780 feet.....Fayette
1780 to 2600 feet.....Yegua
2600 to 3600 feet.....Cook Mountain

Production was probably from near the bottom of the Cook Mountain formation, or may even have been from Mt. Selman.

On drill-stem test the well gave promise of developing at least 50 barrels production



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COAHUILA

SIERRA MADRE

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St Juan de Salinas

Muzquiz

A.R. Mexican

Juarez

Progreso

LA LAJA

Abasolo

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Nadadores

San Buenos Ventura

Cuatrocienegas

Monclova

Castaño

Tamaro Rubio

LAMPAZOS

BUSTAMANTE

VILLALDAMA

MINA

MICHES HIDALGO

SALINAS

GARCIA

Nacional de Mexico

MONTERREY

Ramos Arizpe

Arteaga

SALTILLO

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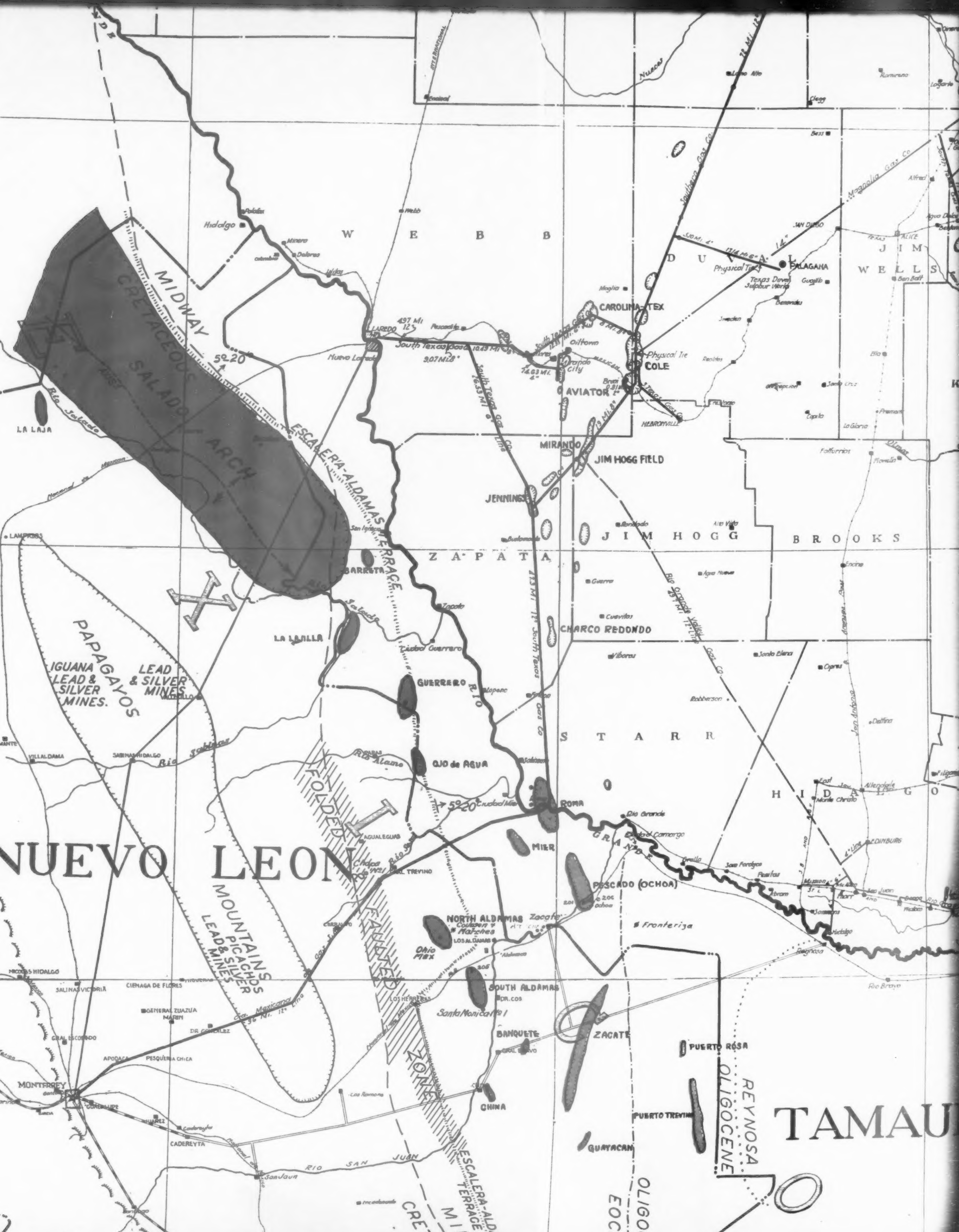
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FOLDED FAULTED ZONE
PAPAGAYOS
IGUANA LEAD & SILVER MINES.
LEAD & SILVER MINES
MOUNTAINS PICACHOS LEAD & SILVER MINES
REYNOSA
OLIGOCENE
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LAREDO
Nuevo Laredo
Hidalgo
LA LAJA
LAMPAZOS
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LA LAJILLA
GUERRERO
OJO de AGUA
AGUALEGUAS
ROMA
MIER
PESCADO (OCHOA)
NORTH ALDAMAS
SOUTH ALDAMAS
BANQUETE
ZACATE
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LOS HERRERAS
LOS ALDAMAS
GRAL. TREVINO
CERRALVO
GRAL. BRAVO
RIO SAN JUAN
San Juan
Rio Salado
Rio Sabinas
Rio Alamo
RIO GRANDE
Ciudad Mier
Ciudad Guerrero
Ciudad Camargo
Rio Grande
Reynosa
Rio Bravo
Santa Monica No 1
Ohio Mex
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Pueblitos
Abram
Mission
Penitas
San Juan
Alamo
Monte Alto
Sullivan
Hidalgo
Progreso
Rio Bravo
Santa Maria
Fronteriza
PESCADO (OCHOA)
ZACATE
PUERTO ROSA
PUERTO TREVIÑO
GUAYACAN
REYNOSA OLIGOCENE
TAMAULIP

JLIPAS

SCALE IN ENGLISH MILES

0 8 16 24 32 40

Wells Drilled or Drilling
as of November

Company, well, location, history, intere

Control de Administracion del Petroleo Nacional
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"lube" oil 9.4 per cent, and carbon residue 3.4 pe

San Juan Drilling Company . . . . . .
On Ochoa (or Pescada) S
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This is the second test of the main part of O
the above test by the "Control," the location be
designated as National Petroleum Reserve—in th
extending 10 metres from high water mark on ea
cessions" being granted on lands in the Nationa
Company obtained its operating rights under a
"Control." The well encountered a gas sand from
it showed 600 pounds rock pressure. The first ca
and later 6⅝-inch casing was cemented at 3536 fe
The well and the contract under which the drilling
W. L. Pearson interests of Houston and Corpus C

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Early in November it was drilling at 600 feet.

Compania de Petroleo Mercedes . . . . . .
On Ochoa Structure. .
tion for test late in

New location is in Lot B, Municipio de Caman
subsidiary of Standard Oil Company of New Jer
with exception of small acreage under direct contr

Compania Petrolera Tamaulipas, S. A. . . . . .
South part of Guerrerro d
below 6950 feet; no oil

This company is affiliated with Humble Oil
located 15 miles south of Guerrerro, Tamaulipas, a
is a structural dome of the Rocky Mountain type
rotary tools, started July 15, 1929, in Wilcox san
formation at 2287 feet, and on November 25, 1930,
It is the deepest well ever drilled in Mexico. N
This well is located near the crest of the southern
dome type. Although this deep test is discouragin
from wells along flanks of the south dome, while
either the crest or the flanks of the north dome.

Drilling in Nuevo Leon, ember 15, 1930

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ne 70 per cent, kerosene 35 per cent, gas oil 18 per cent,
residue 3.4 per cent.

. . . . . San Juan No. 1
(*or Pescada*) *Structure. . Had*
Now standing at 3751 feet.
nain part of Ochoa structure. It is 300 feet northeast of
he location being, like that of Nacionales 201, on land
Reserve—in this case by virtue of being within a strip
er mark on each side of the San Juan River. No "con-
ghts under a special "contract" with the government
gas sand from 3546 to 3580 feet, and on drill stem test
. The first casing cemented was a string of eight-inch,
ted at 3536 feet. The well is now standing at 3751 feet.
ich the drilling rights are held, have been taken over by
and Corpus Christi, Texas, it is reported.

roleo Nacionales . . . . . Ferronales 206
h edge of Ochoa structure.
Drilling around 600 feet.
lways of Mexico's right-of-way near the Ochoa station.
Ochoa structure, but may possibly be off the structure.
10-inch casing was cemented at 410 feet in September.
600 feet.

. . . . . Camargo No. 1
Structure. . . Made loca-
est late in October, 1930.
pio de Camargo. Compania de Petroleo Mercedes is a
of New Jersey, and it controls the Ochoa structure
direct control of the Mexican government.

A. . . . . Guerrero No. 3
Guerrero dome. . Drilling
feet; no oil or gas shows.
Humble Oil & Refining Company. Guerrero dome,
amaulipas, and about 22 miles south of Zapata, Texas,
ountain type, like Teapot dome. The test, drilled by
Wilcox sand (Eocene), hit the top of the Midway
per 25, 1930, was still drilling in Midway at 6959 feet.
Mexico. No important showings have been found.
the southern dome, the structure being of a double-
discouraging, there is still possibility of production
dome, while there is also possibility of finding oil on
orth dome.

States of Nue
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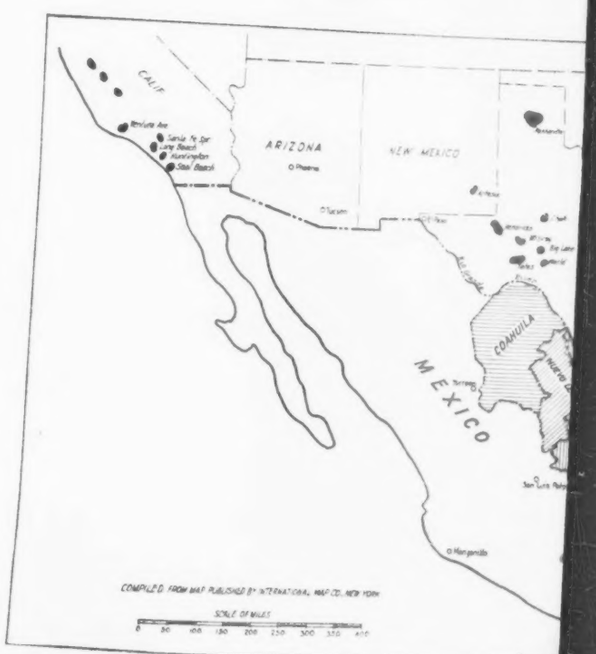
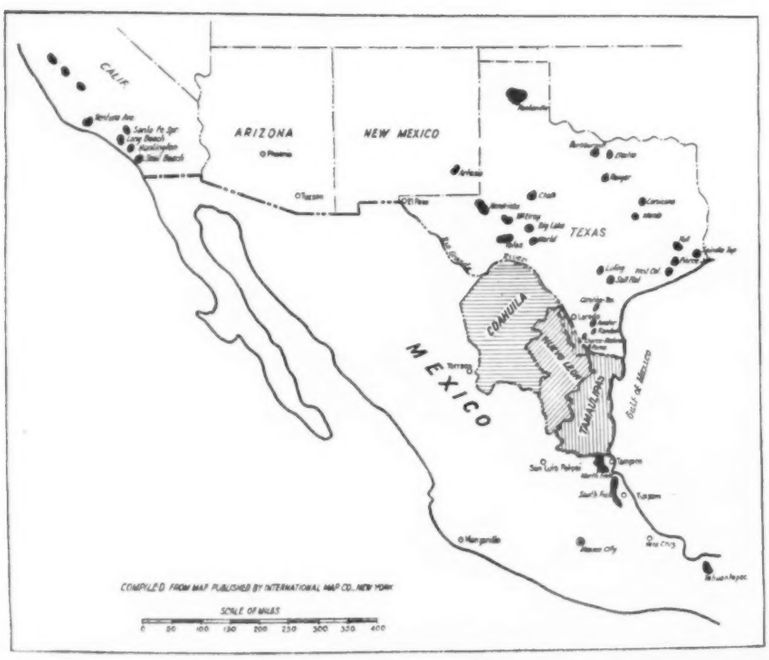


Key map showing Mexican States of Coahuila, Nuevo Leon, a
reference to oil fields in Southwestern United States an

States of Nuevo Leon and Tamaulipas Mexico



Key map showing Mexican States of Coahuila, Nuevo Leon, and Tamaulipas with

SUMM
MAP

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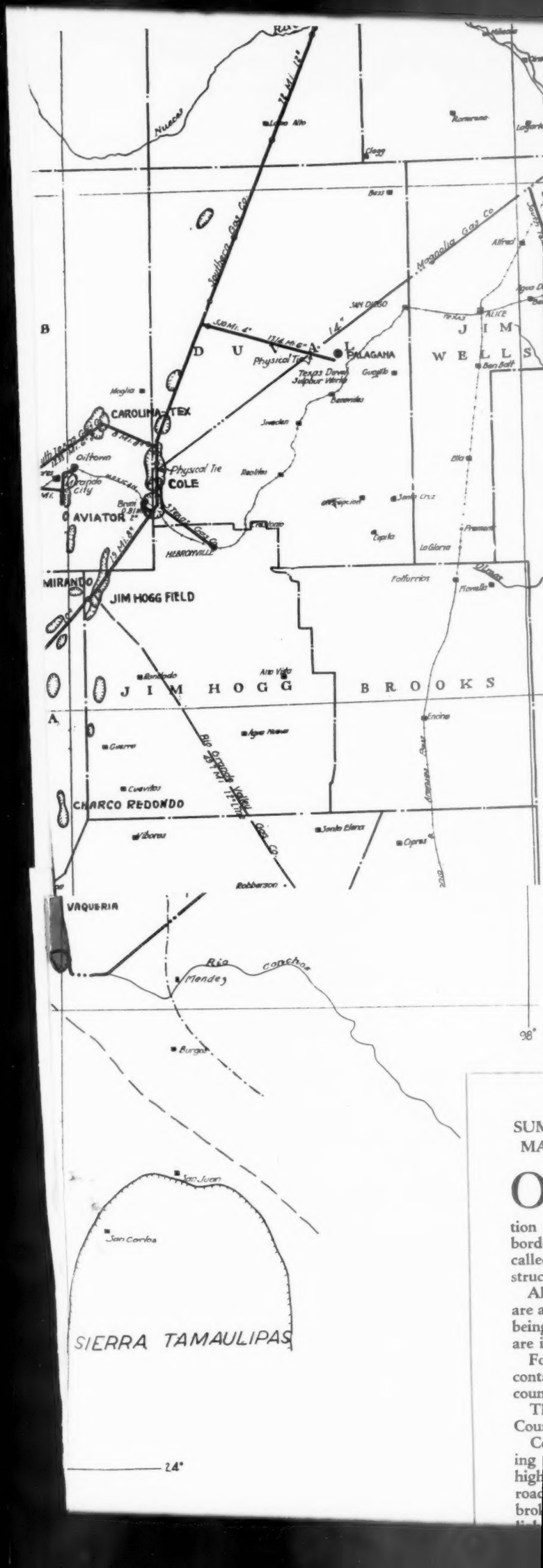
Nueces
Southern Gas Co.
Magnolia Gas Co.
Physical Tie
Texas Davies Sulphur Works
CAROLINA-TEX
Oilhorn
Orange City
COLE
AVIATOR
HERRONVILLE
MIRANDO
JIM HOGG FIELD
JIM HOGG
BROOKS
CHARCO REDONDO
Big Orange Valley Pipe Line
VAQUERIA
Rio Grande
Mendez
Burgos
San Juan
San Carlos
SIERRA TAMAULIPAS
98°
24°

SUMMARY OF INFORMATION SHOWN ON ACCOMPANYING MAP OF NORTHERN NUEVO LEON AND TAMAULIPAS, MEX.

ON the map herewith presented information of general nature is given, including state lines, cities and towns, rivers and mountains.

The numerous surface structures are indicated, and so that their relation to fields in the United States may be seen, the producing fields of the border land of Southwest Texas are shown. (In this connection, attention is called to the fact that the Texas fields are not marked by the definite surface structures found on the Mexican side of the Rio Grande).

Along with the structures, the wells that have been drilled for oil and gas are also shown, the customary symbols for dry holes, drilling wells and so forth being used. Past drilling has been of limited extent, and practically all wells are included.

For the benefit of geologists and others interested, the various formation contacts are shown, along with the structures and major features of the country.

Those interested in the natural gas pipe line conveying gas from Zapata County, Texas, to Monterrey will find the line shown on the map.

Complete information is included on transportation facilities, the map showing the railroads from Monterrey to Laredo and to Matamoros; the paved highway from Monterrey to Laredo (indicated as a solid line) the graveled roads leading out of Monterrey to the east, south and west (appearing as broken lines); and graded roads beyond the ends of the graveled (signified by light double lines).